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REPORT

ON THE

LAND REVENUE SETTLEMENT

OF THE

MUZAFFARGARH DISTRICT

OF THE

PUNJAB,

BY

EDWARD O'BRIEN, Esquire,

SETTLEMENT OFFICER.

1873-80.

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1882.

W. WALLACE, MANAGER.

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No. 687, dated Lahore, 1st June 1883.

From—F. C. CHANNING, Esquire, Senior Secretary to Financial Commissioner, Punjab,
To—The Secretary to Government, Punjab.

Submits the final settlement report of the Muzaffargarh District.

I AM directed to submit, for the orders of His Honor the Lieutenant-Governor, the final report on the settlement of the Muzaffargarh District by Mr. O'Brien, with a review by the Commissioner of Settlements and Agriculture, contained in that Officer's letter No. 340, dated 2nd December 1882. A copy of the Settlement Atlas is also submitted.

General account of the district.

2. The first five chapters of Mr. O'Brien's report are full of varied and curious information as to the district and its inhabitants, but they do not call for any detailed notice here. The district is unique in the Punjab. With the exception of the triangle of the Thal which is let into the north of the district, the country resembles more nearly the Egyptian Delta than anything found in the rest of the Province. It has owed its origin to the rivers, and its alluvial formation, apparently of comparatively recent origin, is witnessed to by the fact stated on page 26 of the report, that every soil is underlaid with sand at greater or less depth. Floods from the rivers, still annually sweep over much of the district, and, while conferring great benefits by the rich deposits of silt left when they subside, and which carry on the process of construction, sometimes turn their beneficient into destructive action. Many embankments exist to regulate and check the floods, and still more are required; while, on the other hand, some 200,000 acres of land are irrigated from canals, which lead the flood-waters of the Indus into tracts either situated beyond the reach, or protected from the action of the natural inundation. In paragraph 19 of Chapter I, Mr. O'Brien states his views as to what is still required for the completion of the arrangements both for irrigation and for protection from floods; and the Officiating Financial Commissioner hopes that gradually it may be found possible to carry out the works there sketched out. The rain-fall is small and insufficient to bring crops to maturity, so that cultivation is only possible when some form of irrigation can be procured. At present only some 23 per cent. of the district is under cultivation. The climate and the flood irrigation seem to be especially suited to the growth of the date palm; over 400,000 female date palms exist; the

fruit is a very important item in the food of the population, and more especially of the poorer classes, and the assessment on the trees yields a respectable amount of revenue to the Government. A very full account of the tree, which is the source of this revenue, will be found in paragraph 27 of Chapter I. of the Settlement Officer's report.

The population of the district.

3. The district is very thinly populated, having only 98 persons to the square mile. The population is mainly Muhammadan and rural, and is composed largely of Jats and Biluchis. According to the census of 1881, the total number of the inhabitants is 338,605; and of these only 21,856 belong to the towns; there are no towns with more than 5,000 inhabitants, and only six with over 3,000 inhabitants. Muhammadans number 292,476. The general character of the people, as described by Mr. O'Brien in paragraph 18, Chapter IV of his report, is not prepossessing. It seems a general rule in the Punjab that in industry and thrift Muhammadans are inferior to Hindús, and populations which inhabit tracts near the rivers, to those which occupy the higher lands, and particularly those tracts in which the cultivation is largely dependent on well irrigation. The cause of this difference is not far to seek. It lies in the varying degrees of exertion required to obtain from the soil the means of support. Where, as in the Manjha, the conditions are such as to necessitate great and constant labor on the part of the agricultural population, there habits of industry and thrift are formed, and the character generally is strengthened; but where, as in the Sailáb tracts, these conditions are wanting, there the population is generally found to be lazy and improvident.

The agriculture of the district.

4. A full and interesting account of the agriculture of the district is given by Mr. O'Brien in Chapter V of his report, from which it appears that 70 per cent. of the whole area under cultivation is sown with rabbi crops, of which more than three-fourths is wheat; and that of the kharif harvest, the staple crops are cotton, indigo, jowár, bájra and rice. Sugar-cane is also grown to some extent in the neighbourhood of towns.

Mr. O'Brien's remarks on the present state of the indigo manufacture in paragraph 8 of this chapter deserve the careful attention of the Deputy Commissioner and of the Commissioner of Agriculture; and efforts should be made to

induce the people to exercise greater care in the preparation of the dye.

Previous revenue administration.

5. The Settlement Officer's description of Sáwan Mal's revenue system will be read with interest: it may perhaps be shortly characterised as the highest possible development of the oriental theory of revenue administration, under which the producers are allowed to retain only so much of the produce as is absolutely necessary for their support, and what is not required for this purpose is appropriated by the State. One peculiarity of the Diwán's system was, that while making no change in the old established rate at which the *mahsul* or State share of the produce had been taken, he gradually raised the revenue by the imposition of a variety of cesses whenever circumstances justified the enhancement, and by this process he equalized the pressure of the demand. Another distinctive feature of his system, as described by Mr. O'Brien, was the extent of direct official interference which it involved. The State, while exacting its own full share of the produce, took care that all who were in any way connected with the land should receive their share also. This doubtless contributed to its success, and secured for it a degree of popularity which a system so essentially oppressive could not otherwise have obtained. The whole of the date crop was taken by the Government, which indeed arrogated to itself rights of ownership over all trees. Tolls, taxes on artizans, camels, female buffaloes, sheep and goats, and also transit and town duties, were further sources of revenue. But although the people were thus deprived of all surplus income, they were at the same time afforded all the assistance which they required in order to carry on production. They were treated and managed like children, and hence, when on the introduction of British rule the Government support was withdrawn, and they were left to manage their own affairs, they were at first hardly capable of doing this even though their burdens had been very materially lightened. The history of our revenue administration in this district as given by the Settlement Officer in paragraphs 14 and 15, is not one that can be looked back upon with any satisfaction. The first summary settlement, though moderate on the whole was unequal in its incidence owing to the indiscriminate remission of cesses which, as explained above, had served to equalize the revenue, and in consequence of the great fall in prices which followed soon after, it completely broke down.

Again, when it was revised a few years after, the demand in two tahsils was unfortunately increased owing to the season being unusually favorable.

This new settlement broke down almost at once, and was followed in 1860 by a third summary settlement, by which the demand was very materially lightened. This was the last of the summary settlements, and it would, Mr. O'Brien thinks, have worked well had proper attention been paid to the annual clearance and repairs of the canals, and to the effect of the rivers on the lands subject to their action.

Tenures.

6. The existing tenures have their origin in the former revenue administration. Broadly speaking, the intrests in the land subordinate to those of Government are—

1. Those of the superior proprietor with a title usually based on bare original possession.

2. Those of the inferior proprietor, whose titles rest on cultivation and expenditure of capital, and are based on permission to settle and cultivate waste land given either by the superior proprietors or by the Government, but chiefly by the latter, which looked only to the increase of its revenue, and with this object claimed a right to dispose of waste lands as it pleased.

3. Those of the tenants whose rights differ in strength according as they were the original clearers of the waste or not. The control of the cultivated lands now ordinarily belongs to the inferior proprietors; that of the waste to the superior proprietors. The rights of each class are based on the system of division from the grain heap, which existed under Native rule; and the share known as *mahsúl*, formerly taken by the Government, is now the right of the person, generally the inferior proprietor, who pays the Government revenue: the distinction of superior and inferior proprietor has, however, to a great extent, disappeared under our rule, except in the Sanawan Tahsíl. There are other varieties of tenures, described by Mr. O'Brien in his Chapter VI; but it will be observed that the forms into which they tend to fall are moulded on the above types, and have reference to the corresponding partition of the garin heap. As in most districts of the Mooltan Division, the villages are mere groups of wells, devoid of any real connection.

7. Chapter VII. of the Report, which professes to describe the settlement, hardly contains such an account of the work performed during the operations known by this comprehensive term as is required by rules under the Land Revenue Acts CV. The brevity of this part of Mr. O'Brien's report is out of proportion to the fulness of the earlier parts; the account of the assessment is specially meagre, although the rule on the subject distinctly states that such portions of the assessment reports as are likely to be useful for future reference shall be incorporated in the final report.

Remarks on the brevity of Chapter VII. of the report.

8. The cost of the settlement operations, which lasted about seven years, is stated at :—

Cost of the settlement.

	Rs.
From Imperial Funds	3,97,450
„ Settlement fees	2,74,318
TOTAL ...	6,71,768

And the result of the re-assessment is given by Mr. O'Brien as follows :—

	Old Revenue Rs.	*New Revenue.* Rs.
Land Revenue ...	5,04,970	5,24,468
Grazing ...	34,623	33,388
Dates ...	11,503	19,226
TOTAL	5,51,096	5,77,082

Adding to the new revenue the amount for which the Government rakhs are leased, the Settlement Officer states the result of the settlement to be an increase of Rs. 32,986, or about 6 per cent.; owing to the very large amount of the jama which is fluctuating, the total demand under the new settlement will of course constantly vary.

9. The settlement operation included the formation of a record of rights and the re-assessment of the district. The marked features of the settlement were—

Chief features of the settlement.

(I).—The revision of the rakh demarcation.

(II.)—The placing the riverain tracts under a fluctuating system of assessment.

(III).—The arrangements made for the future management of the canals and the more complete organisation of the *chher* system.

(IV).—The arrangements made for the future relief of estates in case of the failure of canal irrigation.

The changes of system made under these headings will now be briefly referred to in the above order.

The revision of the rakh demarcations.

10. The revision of the rakh demarcations which had been made on paper in 1861, and on the ground in 1869, resulted in a diminution of the rakh area from over 970,000 to 311,554 acres. The areas which were restored to the people have been included in the village estates, and assessed at a demand fixed for the term of settlement; the grazing in the rakhs which have been retained is let on lease, and rules under Section 48 of the Punjab Laws Act for the management of the rakhs under the Deputy Commissioner were published in the *Punjab Gazette* of 30th March 1882, and these rules again have been supplemented by administrative instructions which were published in this office Circular 22 of 25th April 1882. The change from the old system under which the payments of the villages for grazing depended upon the accident of the village containing land which had been demarcated as rakh, to the present system under which each village is in the first place assessed according to the grazing land which it possesses, and only pays an addition to this assessment, if it actually sends its cattle to the Government rakhs, cannot fail to be beneficial; and according to the table before given, the grazing revenue, including the income from leasing the rakhs, is now greater than under the old arrangements.

The placing the revenue lands under a fluctuating system of assessment.

11. The necessity for placing the riverain lands under some system of fluctuating assessment, and the character of the system which has been introduced, are clearly explained in paragraphs 7 and 8 of the Settlement Commissioner's review. Briefly stated, the necessity for the system arises from the fact that in these tracts the ability of the cultivator to crop the land depends not on his own will, but on the capricious action of the two mighty rivers, which wash the sides of the district; and the system introduced is one in which the land cultivated each year is

assessed at rates which vary according to the nature and the mode of irrigation. On the Chenáb, above its junction with the Sutlej, the wells have a fixed assessment; but throughout the rest of the district the whole of the tract subject to the action of the rivers is annually re-assessed. The assessments when made are sanctioned by the Commissioner, and then reported to this office, where the statements are examined and the results recorded in a register. The results so recorded for the three years 1879-80, 1880-81 and 1881-82 are as follows :—

Tahsil.	Year of measurement.	Jama of fluctuating revenue.					
		On grazing lands.	On cultivation.	Abiána.	On Date trees.	*Total.* Khálsa.	*Total.* Jágír and Mafi.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Muzaffargarh ...	1879-80	2,752	31,724	1,521	299	35,363	933
Alípur ...	„	10,551	58,864	8,771	2,296	80,345	137
Sinánwán ...	„	2,641	23,628	3,558	381	30,208	...
District Total ...	...	15,944	1,14,216	13,850	2,976	1,45,916	1,070
Muzaffargarh ...	1880-81	3,022	34,922	1,749	333	38,902	1,124
Alípur ...	„	10,353	60,427	8,114	2,672	81,429	137
Sinánwán ...	„	3,540	19,254	4,033	381	27,208	...
District Total ...	...	16,915	1,14,603	13,896	3,386	1,47,539	1,261
Muzaffargarh ...	1881-82	3,271	38,669	2,131	320	43,261	1,130
Alípur ...	„	10,537	63,820	8,292	2,671	85,125	195
Sinánwán ...	„	3,457	22,179	4,771	381	30,753	35
District Total ...	...	17,265	1,24,668	15,194	3,372	1,59,139	1,360

The results of the system, it will be seen, are financially favorable, and the system is reported to be popular among the people. But, as Mr. O'Brien pointed out in his Revenue Report for 188 -82, it entails extremely heavy work on the Tahsíldárs; these at present are efficient, but one inefficient man would do much towards ruining the settlement. The Kánúngo establishment has recently been temporarily strengthened in order to facilitate the necessary supervision of the annual measurement, and the Commissioner of Settlements and Agriculture will shortly submit proposals for the permanent revision of this establishment.

The assessment of the canal irrigated lands.

12. The main principles of the assessment of the lands dependent on canal irrigation have been—

(i).—To give a fixed assessment to all lands irrigated from canals at the time of settlement.

(ii).—To arrange for due remissions of part or of the whole of this demand in case of the failure of canal irrigation.

(iii).—To provide for the levy of a light acreage rate fixed at six annas in Sinánwán and at eight annas on the other two tahsíls where canal irrigation is extended to wells and pattís not so irrigated at the time of settlement.

(iv).—To arrange for the crediting to the Canal Department of a due proportion of the fixed land revenue assessed on the canal lands; the proportions fixed upon were two-thirds of the assessment of lands watered from canals, assisted by wells, and the whole of the assessment of lands watered from canals alone.

Major Wace in his review gives full information as to the measures which have been taken with reference to the above arrangements. The letter from Secretary to Government which sanctioned the extension to Muzaffargarh of the Mooltan rules for remission of canal revenue is No. 881 of 12th August 1881, and the Commissioner of Mooltan in his No. 161, dated 14th February 1883, reported that the rules had been duly promulgated. Major Wace writes that an engagement has been taken from the owners of the villages concerned accepting these rules as one of the

conditions of the settlement; but from the correspondence with the Commissioner of the Division this does not seem to be the case; and it will be advisable that the Government in sanctioning the assessments should expressly note that this sanction is given subject to the observance of these rules for remissions. The rules themselves, and full instructions for the working of the system, were published in this office Circular No. 39, dated 31st August 1882. They have been carefully explained to the people concerned through the Tahsíldárs and Extra Assistant Commissioner Gholám Murtazá Khán, and copies of them have been placed with the settlement records of all canal-irrigated villages.

Hitherto no remissions have been given under these rules. The assessment on new canal irrigation amounted to Rs. 1,513 in 1880-81 and Rs. 1,873 in 1881-82; these amounts are treated as water-advantage revenue, and are credited to the canals in addition to the share of the fixed revenue for which credit is given, and which amounts to Rs. 2,27,520. The great advantage of this new system is, that if in future the canals are badly managed, the fact will be promptly brought to the notice of Government by the falling-off in its revenue, and relief will be given to those who suffer from the mismanagement.

The *chher* system.

13. Draft rules for the future working of the chher system in Muzaffargarh, which is sufficiently described in paragraphs 7, 8, and 9 of Chapter VII of the report, and in paragraph 12 of Major Wace's review, were submitted to Government by this office letter No. 743 of 26th July 1882, and are still under consideration. The rules are based on those which were framed for the Mooltan District. As the obligatory force of the rules rests upon an entry in the settlement records, it will be necessary that the rules should be formally approved and promulgated before the sanction of Government is given to the tenders of engagement for the land revenue and to the settlement records, and that the observance of these rules should be one of the conditions on which the assessment is sanctioned. One important point which is still under discussion relates to the question whether the Executive Engineer in making the annual distribution of chhers is to use, as the basis of that distribution, the area irrigated in the preceding year, or whether it will be possible for him to ascertain the areas of the current year's irrigation in time for him to use these as his basis.

The rules as now drafted defined strictly the objects on which the Zar-i-nágha Fund shall be expended, and expressly state that it shall not be employed in making new canals or extensions of existing canals; the object of this provision is to restrict the expenditure from the fund to its legitimate purpose, the performance by hired labour of work which the absentees would, if present, have been bound to execute.

The relations between the Canal Officer and Deputy Commissioner.

14. Major Wace in paragraph 13 of his review has conveniently supplemented Mr. O'Brien's brief reference to the appointment of the Executive Engineer to the charge of the canals. Since his review was written there has been some further correspondence on the question of the relation of the Muzaffargarh Canal and District Authorities, the result of which will appear from the following extract from paragraph 2 of letter from Junior Secretary to Government, to the Junior Secretary to Government, Public Works Department, Irrigation Branch, No. 64—1150, dated 25th September 1882 :—"His Honor agrees with you and the Financial Commissioner that it is not necessary to subordinate the Executive Engineer to the Deputy Commissioner to a greater extent than is required by the 'chher' rules and in their proposed relations as regards the revenue management of the canals. He also agrees that for the present the Executive Engineer has enough to do with the canals alone without District and Provincial works. This question should be brought up again at some future date for reconsideration. The Zar-i-nágha Fund should, as proposed, be made over to the Canal Department for management and expenditure." At the same time it was proposed to adopt a more elastic system of financial control over expenditure from the Zar-i-nágha Fund than that prescribed by the Public Works Code; but it is not known whether this question has been disposed of or not. Major Wace shows that the transfer of the canals to professional care has had a more satisfactory effect on their state, and it is to be earnestly desired that the experiment which has thus been made in Muzaffargarh may be sufficiently successful to justify its extension in the same, or in a modified form, to other districts similarly circumstanced.

General results of the Settlement.

15. The remarks made by Major Wace in paragraph 15 of his review very accurately sum up the results of the settlement. Mr.

O'Brien was unable, owing to defects in the previous revenue management of the district, to secure for Government any material increase of the revenue, but he has placed the future revenue administration of the district on a sound basis, and it may be confidently hoped that under the present settlement the district will make marked progress, and that when the time for re-assessment comes round, the Government will be able to claim a substantial enhancement of revenue.

Term of settlement.

16. The term of settlement was fixed at 20 years by paragraph 8 of Secretary to Government's letter No. 903, dated 18th August 1881, when passing orders on the Revenue Rate Report of the Muzaffargarh Tahsíl.

Instalments.

17. There is a mistake in paragraph 19 of chapter VII of the report. The kharíf instalments as sanctioned are—

Tahsíl Alipur—15th December, 15th January, 15th February.

Tahsíl Muzaffargarh—1st December, 1st January, 1st February.

Tahsíl Sanaowan—15th December, 15th January.

This has been pointed out to the Commissioner of Mooltan, and the general question of the revenue instalments throughout the Province is now under consideration in communication with the Commissioner of Settlements and Agriculture.

Sanction asked to the assessment and to the record of rights.

18. The sanction of His Honor the Lieutenant-Governor is required under Section 18 of the Land Revenue Act, 1871, to the record of rights and to the assessments; and the sanction to the assessments should be made conditional on the revenue-payers consenting to such rules for the working of the *chher* system as the Government may from time to time promulgate, and on their accepting the revised rules for remission of revenue in case of the failure of canal irrigation, to which reference has been made in paragraph 12.

Remarks on Officers.

19. The Officiating Financial Commissioner desires me to add, in conclusion, that he entirely endorses the praise given to the Settle-

ment Officer's work by the Settlement Commissioner, and he trusts that the acknowledgments of Government will be conveyed to Mr. O'Brien and to those of his subordinates who have been selected for commendation by Major Wace. The report herewith forwarded is a most interesting one, and is evidently the result of much careful observation and research into the physical geography and former political and fiscal history of the tract of country comprised within the limits of the district. It also contains very full details of the social life of the people, and its only defect is the one already noticed, the meagreness of the section devoted to describing the operations of the settlement itself.

No. 340, dated Kasauli, 2nd December 1882.

From—Major E. G. WACE, Commissioner of Settlements and Agriculture, Punjab,
To—The Senior Secretary to Financial Commissioner, Punjab.

I HAVE the honor to forward the Final Report on the recent settlement operations in the Muzaffargarh District by Mr. E. O'Brien, C. S., Settlement Officer. The report reached me on the 29th April 1881, and was sent to the Central Jail Press to be printed on the 5th August 1881. It was not till the 23rd November that I received back the last portion of the report from the Press.

2. The operations now reported were commenced in May 1873. Measurements were completed in two years, *i.e.*, by June 1875. The 1st tahsíl assessment report was submitted in February 1877, and the last in July 1878. The orders on the last report were not received till September 1879, and those on the previous reports had been similarly delayed. Operations were completed in July 1880, 7¼ years after they were commenced. But at least 15 months of this duration was caused by the delay which occurred in the issue of orders on the assessment reports. The settlement was supervised by Mr. Lyall, as Settlement Commissioner, up to January 1879, and for the remaining 18 months by myself; Mr. Lyall has consequently a much more intimate knowledge of the character of the work and of the district than I have.

Course and duration of operations, Chapter VII, paragraph 1.

3. The report is replete with valuable local information, to attempt to condense which in this review would serve no useful purpose. Both this book and his valuable work on the Mooltáni language evidence in what a real sense Mr. O'Brien lived among the people; and he has in these two works made it comparatively easy for subsequent officers to acquire an intimate knowledge of the district. Chapter I describes the physical geography and natural history of the district, and also gives a very detailed account of the canals. Chapter II describes its history anterior to British rule, so far as this is known. Chapters III and IV give an account of its population, their habits, religion, and language. Chapter V describes the agriculture and other industries, but the latter are very unimportant.

Contents of the Report.

Chapter VI describes the revenue systems which preceded our own, the summary settlements and the local tenures. Mr. O'Brien's remarks on the Sikh revenue system evidence much care, and will be read with interest. The tenures also are described with as much exact clearness as brevity. The only adverse criticism which can be made on the report relates to the unusual brevity of the VIIth Chapter, in which the settlement operations and assessments are described.

Measurements and records of rights, paragraphs 2, 14 and 15 of Chapter VII.

4. So far as I could judge, the measurements were good. The record of rights has been very well put together, and the volumes are neatly written. In particular the detailed history of each well or patti has been very clearly described under the system explained in paragraph 14 of Chapter VII. The only shortcoming I noticed is that the shares have been unnecessarily amplified and refined; the result being that the record does not state each owner's share in the terms in which he would himself describe it. Mr. O'Brien would have corrected this had it been in his power; but there were some difficulties involved, and he did not see how to meet these until it was too late to correct the record. The administration papers and the records of customs are very well put together.

Revision of the rakh demarcation and tirni revenue, paragraph 22 of Chapter I. and paragraphs 3—6 of Chapter VII.

5. The faults in the previous very rough demarcation of the rakhs were corrected by the Settlement Officer with much care, and a record of each rakh has been drawn up. The remarks in paragraph 22 of Chapter I. pointing out the difference between these rakhs and those of the Mooltan District deserve attention; especially when compared with para. 5 of his Chapter VII. Prior to these operations, the tirni was assumed to be due mainly from rakh lands, and was assessed from year to year. The assumption was incorrect, and the system of assessment was ill-suited to the local circumstances. The grazing revenue due from the waste of each village has now been settled at a fixed charge for the term of settlement, and the rakhs are leased separately. The introduction of the new system has caused no loss to Government; but of the grazing revenue now paid about eighth-ninths is contributed by the village waste, and only one-ninth by the rakhs. The change of system must have given great relief both to the people and to the Government Revenue Officers. The rules for the management of the rakhs referred to in para. 4 of Chapter VII. were issued in the Government's Notification No. 94 dated 21st March 1882, and a copy is enclosed with this letter in order that it may be added to the appendices of the report.

The past fiscal history of the district under British rule.
Paras. 13—17 of Chapter VI.

6. The first summary settlement appears to have fixed the revenue at less than three-fourths of the Sikh collections (reckoning not only the reduction in the *mahsúl*, but also the abolition of cesses). By 1861 this demand had been further reduced a seventh in Muzaffargarh and a fourth in the

other two tahsíls. That is to say, by 1861, the State had reduced its demand to about 60 rupees for every 100, that the Sikh Government levied up to 1845. The re-assessment now reported has increased this demand by four per cent. That this should be the result of over 30 years of British rule in a fine alluvial district, possessing unlimited facilities for irrigation of which only a fourth is cultivated, and in which the culturable waste available for cultivation (I do not count the rakhs) is twice the area of the present cultivation, is very strong evidence of the practical failure of our revenue administration in this district up to the date of Mr. O'Brien's operations. There had been no increase of cultivation, the canals which were in fair order in 1847, and on which at least two-fifths of the revenue depends, steadily decreased in irrigating efficiency, and abuses of all kinds had abounded in the collection of the revenue. Mr. O'Brien's efforts towards the correction of these results have been mainly applied in two directions. He has relieved from the system of fixed assessment those alluvial lands which were so exposed to or dependent on the river floods, that the conditions of their cultivation were insecure and beyond the control of the cultivator; and he has established a system of canal management, which will secure the proper management of these canals in the future, and also due relief to the cultivators when the canal water fails them.

Para. 1 of Chapter I.

Chapter VII. para. 24; also para. 8 of same Chapter, and para. 16 of Chapter VI.

7. I will first deal with the assessment. The whole Indus bet in all three tahsíls has been placed under a fluctuating assessment; also the whole Chenab bet below the junction of the Chenab with the Sutlej. North of that point the bet wells have a fixed assessment, but the sailáb lands of the bet are assessed annually. The object of this fluctucting or annual assessment is this. Under the expired settlement the assessment was substantially on the bet land in its culturable aspect; that is to say, it was assumed that if the land was culturable it would be cultivated. The lands of each village fell roughly into two classes, (i)—those which were culturable or cultivated at the time when the settlement was made, and these had a fixed assessment, to which the owners were rigidly held so long as by river action the land was not made permanently unculturable; (ii)—lands newly formed by the river or made culturable by alluvial deposit after date of settlement, and these were assessed *as soon as they became culturable* at the average rate of the fixed assessment on the 1st class. The fault of the system was, that it made the assesment depend on the apparent quality of the soil: and assumed that its cultivation was at the command of the cultivator in the same degree as in the case of lands not exposed to floods, whereas in truth, the power of the owners to cultivate it depended in a very minor degree on themselves, and mainly on the action of the floods; which action extended with similarly capricious results over the whole alluvial that they inundated. The new system of assessment is based on the recognition of fact, that such land as is exposed to the annually recurring action of the Indus and Chenab floods, is not really under the command of the cultivator; when the action of the floods is favorable, he can culti-

The assessment paras. 21—32 of Chapter VII.

Lands placed under fluctuating assessment.

vate and can pay revenue accordingly. When he does not cultivate, it is usually due to the unfavorable character of the floods; and to enforce a claim for revenue under such circumstances is opposed to the fundamental principles of our revenue administration. The rates fixed for sailáb cultivation in these lands vary from 18½ and 17 annas on the Chenab, to 15, 14, and 13 annas on the Indus. The Chenab rates are much the same as those of the Mooltan District. The Indus rates are much the same, or but slightly higher than those recently applied in like circumstances in the Dera Ismail Khan District. In the numerous cases in which these sailáb lands are assisted by wells or jhallárs, an additional rate is charged of Rs. 9 per well on the Chenab and Rs. 8 and 6 on the Indus. These well rates are equivalent to an enhancement of the sailáb rate by 5 and 6 annas, so that the nett result on these sailáb lands assisted by wells, is much the same as in Jhang where they have been charged from 20 to 22 annas per acre. In the Bhakkar Tahsíl of Dera Ismail Khan also such lands have been charged 20 annas per acre.

Dera Ismail Khan Settlement Report, paras. 486, 494 and 499.

Chapter I., para. 13.

Jhang Report, para. 183.

8. The whole cultivated area under fluctuating assessment is about 120,000 acres, and it contributes over a fourth of the revenue of the district. The Settlement Officer shows that this measure has already increased the revenue of the sailáb lands by nearly Rs. 15,000, or one-tenth. And I believe that the annual reports show that the system is worked with ease and is appreciated equally by the Revenue Officers and by the land owners; and that the revenue assessed under it is collected with greater ease than that of any other part of the district. It would be nothing less than a calamity, if for lack of supervision, a system so well adjusted to the physical circumstances of these sailáb tracts were to fall into confusion and be discredited.

Gross result of the fluctuating assessment.

Chapter I., para. 11, Chapter VII., para. 35.

9. In the rest of the district the system of fixed assessments has been continued, it being assumed that the canals would in future be properly engineered and managed. Looking only to the past, this was no doubt a bold assumption to make; but as I shall show later on we had grounds for believing this. Lands irrigated by wells alone or by canals alone have been assessed at from 15 to 20 annas per acre, and when assisted by both agencies at from 19 to 28 annas. These rates seem to me on the whole rather above than below those recently assessed in the adjacent tracts of the Mooltan District.

The fixed assessment of the district.

Para. 11 of Settlement Commissioner's No. 281, dated 14th September 1881, reviewing Mooltan Settlement Report.

10. The share of the fixed revenue to be credited in future to the Canals is—

Share of the fixed revenue to be credited in future to the canals.

Para. 11 of Chapter VII., and Settlement Commissioner's No. 76, dated 20th April 1882, to Settlement Secretary to Financial Commissioner.
Secretary to Government Punjab's No. 903, dated 18th August 1881.

Tahsíl.		Amount.
		Rs.
Sanawan	...	51,549
Muzaffargarh	...	1,21,746
Alipur	...	54,225
Total	...	2,27,520

In addition to this, land newly coming under irrigation will be charged 6 annas per acre in Tahsíl Sanawan, and 8 annas per acre throughout the rest of the district. (This decision has been arrived at since the Settlement Officer wrote the last part of para. 11 of his Chapter VII.) The 8 annas charge on new irrigation will not be fixed revenue, but will fluctuate each year according to the area of that irrigation.

11. But though the canal revenue due from lands irrigated at the time of settlement has been fixed for the term of the new settlement, as was the case under the settlement that has expired, arrangements have been made with the object of securing adequate relief to the land owners in cases of complete failure of a canal or successive partial failures of a severe kind. It was one of the main faults of the expired settlement, and a cause of severe pressure of revenue during its currency, promoting illicit practices in its collection, and demoralising the land owners from whom the canal revenue was due, that no provision had been made for necessary adjustments of this nature. In the Mooltan settlement just concluded, the Settlement Officer decided for each holding the extreme limit of revenue remissible on such grounds. But in Muzaffargarh the same object has been secured by an entry in the administration paper of each village. The entry provides a maximum limit to be applied to the holdings of each village. This limit usually is (i) for lands dependent wholly on canal irrigation, the whole revenue; (ii) for lands irrigated both by wells and canals, usually ½ the revenue; but (iii) in special villages ⅔ or ¼, according as the wells happen to be peculiarly dependent on the assistance of the canals or comparatively independent of such assistance.

Conditions provided for the remission of canal revenue in the case of the failure of the canals.

Para. 11 of Chapter VII., also Settlement Secretary to Financial Commissioner's No. 725, dated 11th January 1881 to the address of the Secretary to Government, Punjab, and Secretary to Government's reply No. 881, dated 12th August 1881.

Detailed rules defining the circumstances under which such remissions will be allowed—the same as sanctioned for the Mooltan District—

have been incorporated in the Settlement Record; and an engagement has been taken from the owners of each village concerned accepting these rules as one of the conditions of the Settlement. The rules are as follows:—

I.—"No remissions should ordinarily be allowed either for total or partial failure of canal water when the total assessment (fixed and remissible) of the well or patti is much below rates. For it will be considered that the assessment of the holding shows that allowance for such failures has been made in the assessment. The only exception to this rule will be when a severe failure, resulting in large diminution of cultivation or great loss of crop, occurs for several consecutive years. The Deputy Commissioner may then grant some remission if he thinks the assessment, though much below rates, has become temporarily oppressive owing to the continuous failure. But if the assessment is not merely much below rates, but is exceedingly light and trifling in amount, then no remission should be allowed under any circumstances."

I.—Lands assessed below rates. No remission,

except in case of continuous failure,

and not then if the revenue is very light.

"*Explanation.*—The total assessment of a holding will be held to be below rates if the sanctioned revenue rates of the circle (canal and well, or canal alone, as the case may be) when applied to the average annual cultivated area, as ascertained by the Settlement measurements and subsequent girdáwaries, give a product above such total assessment.

Explanation of "assessed below rates."

"II—No remission should be allowed if it appear that the applicant has intentionally failed to take water and to cultivate the well or patti in question, for the purpose of increasing the cultivation of other wells or pattis in which he is interested."

No remission if canal water is applied to some holdings to the neglect of others.

"III.—As it is difficult to distinguish irrigation or moistening by river or rain drainage floods from irrigation by canal water, all such moistening which has benefited a well or patti will be counted as canal irrigation in dealing with claims to remission."

All river flood and drainage irrig ation to be held to be canal irrigation.

"IV.—When the total assessment of a well or patti is up to, or but little below, the canal and well, or canal alone, revenue rates of the circle, the following rules will apply:—

II.—Lands assessed at revenue rates.

"(1).—If no canal-water is received during the season, or if the crops sown are entirely spoilt by the canal ceasing to flow, a remission should be granted, provided, of course, that rules II and III do not apply.

Total failure entitles to complete remission.

"(2).—If, however, the failure is only partial, that is, if some canal-water is received during the season and some crops are grown with its aid, no remis-

Partial failure does not necessarily entitle to any remission,

sion should be allowed merely because the supply has been below the average; for the revenue rates were so pitched as to allow for a considerable degree of fluctuation in amount of canal-water received.

"(3).—Some remission should, however, be allowed if the partial failure is both severe and continuous, that is, if in two or more consecutive years the supply of water is so scanty and inopportune as to cause much injury either by diminishing the area of cultivation, or by preventing the cultivation of the usual proportion of the superior crops, or by causing part of the crops sown to dry up."

unless it is continuous and causes much injury.

When framing these rules, the Financial Commissioner observed that he considered it necessary strictly to define and limit the power of Deputy Commissioners to grant remissions. The fixed contract for the Government Revenue is of a liberal character, and it should not be remitted on light grounds. But within the limitations stated in the rules the Financial Commissioner said that he wished to rely on the discretion of the Deputy Commissioner and to encourage him to use that discretion freely. There can be no doubt that these rules, while sufficiently securing the State against ill-founded claims, will provide sufficient relief in the case of canal failures. And situated as the Muzaffargarh canals are, it would be unreasonable to expect that no such failures shall occur, even under the best engineering management.

12. The Canal Revenue above referred to occupies the same position as the owner's rate described in Sections 37 and 38 of the Northern India Canal and Drainage Act; that is to say, it is not in its history and present position so much a charge for the water as an assessment of Government's share of the increased rent arising from the irrigation of the land. No occupier's rate has ever been levied on these canals, mainly no doubt because they owe their existence to the co-operation of the local ruler and of the irrigators; and have always been maintained by a continuance of that co-operation. It is probably not the case that they were constructed without a considerable expenditure, or otherwise than under the direction and control of the local ruler; on the other hand, the digging was done mainly by the irrigators, and the necessary annual repairs have always been provided under the same system. For this reason the following entry has been made in the Administration paper of every village irrigated by these canals:—

The system of clearing the canals annually by chher or statute labor, Chapter VII, paragraphs 7-9.

Settlement Secretary Financial Commissioner's No. 3226, dated 1st May 1879, to Settlement Commissioner Punjab.

"Whereas Government has not introduced into this district the system of occupier's rate laid down in Section 36 of the Canal Act, we on our part engage to maintain the custom hitherto in force, under which the canals are cleared out every year by chher labor. And we agree that the number of days, chher labor supplied by us shall be assessed according to the area irri-

Chher and Zar-i-nágha.

gated. Persons who fail to supply the chher labor thus demanded will pay a cash zar-i-nágha, the amount of which will be fixed by the Government's rules under the Canal Act."

The entry was made without waiting for the sanction of Government, as Government has decided to maintain this chher custom, and as it is a Settlement Officer's duty to see that essential arrangements of this nature, expressing pre-established custom, are incorporated in the Settlement Record. But since the entry was made it has been proposed to draw up detailed rules for the supply of chher labor, of the same nature as those sanctioned for the Mooltan District, and, following the precedent of that district, to incorporate these rules in the Settlement Record. I have not been informed what final decision has been arrived at on the subject.

Settlement Secretary Financial Commissioner's No. 5406, dated 25th July 1881.

Secretary Government Punjab's No. 726, dated 5th July 1881, to Joint-Secretary Government Punjab, Public Works Department, Irrigation Branch.

13. The Settlement Officer notices in very brief terms the appointment of an Executive Engineer to the charge of the Muzaffargarh Canals in March 1880. I quote in the margin the correspondence which ultimately secured this reform, in the hope that the conditions subject to which it was sanctioned may not be lost sight of. For 5 years previous to the final reference from this office dated May 1879, both the local Revenue Officers and the Controlling Officers of the Irrigation Department had been pressing on Government a measure of this nature, being both equally convinced that the successful management of the canals, and by consequence the prosperity of the district, could not be secured unless the canals were entrusted to a trained Engineer. But the estimates of the increased expenditure which would be incurred by the introduction of the usual Public Works Irrigation system could not be stated at a lower figure than Rs. 50,000 per annum; and such an expenditure both the Revenue authorities and the Local Government declined to recommend; and the Government consequently decided that no permanent assistance could be given except the services of a Native Superintendent assisted by a Native Engineer of a Subordinate Grade, both of whom were to be paid from the fines levied on absentee chher laborers.

This was a truly disheartening result of 5 years' efforts and correspondence.

Future system of canal management.

Chapter VII, paragraph 8.

Settlement Commissioner's No. 234, dated 29th May 1879, to Settlement Secretary to Financial Commissioner.

The latter officer's No. 4530, dated 23rd June 1879, to Joint-Secretary to Government Punjab, Irrigation Branch, Public Works Department.

Joint-Secretary, Public Works Department (Irrigation Branch), Government Punjab, No. 2186, dated 7th May 1879.

But as hopes were held out that skilled assistance would be given if the new outlay therein involved could be reduced from Rs. 50,000 to Rs. 25,000 per annum, the local authorities and Superintending Engineer of the Derajat Circle made another endeavour to secure the desired

assistance. It was pointed out that the reluctance of Government to act in the matter had arisen from two causes,—1st, from an apprehension that the introduction of Canal Officers would bring in novel and unnecessary systems of management for which the people were not prepared; and, 2ndly, from the large additional expenditure that was proposed as necessary to the introduction of the new agency. The Settlement Officer, though strongly in favour of the change, had admitted that the people disliked the idea of the proposed change owing to the apprehension first mentioned. In order to meet these objections it was proposed that the Executive Engineer in charge of the Muzaffargarh Canals should work as an Assistant to the Deputy Commissioner, as regards the Revenue management of the Canals and the working of the chher system; that no new Revenue establishment should be introduced, but that the Executive Engineer should have the assistance of the Thasíldárs, Lambardárs and Patwárís, in the same manner as they had hitherto been employed by the Deputy Commissioner; that all alterations of irrigating systems should be studiously avoided, the Executive Engineer merely continuing the previous system of Revenue management under the Deputy Commissioner's control, at the same time as by his skilled knowledge he secured the proper annual clearing of the Canals, their improvement and extension. The entire new outlay involved in these proposals was found on examination in the Chief Engineer's office to be Rs. 28,780. It was shown in the course of the correspondence that the pre-existing system, which threw the charges of the Canal management on the absentee chher fund, was a misapplication of the purposes for which that fund was levied; that the system had in the past supplied a mo ive for the oppressive mismanagement of the chher system (for obviously if there were no fines there were no funds for paying expenses of management and to meet the cost of necessary works); and that, if the management expenses were still to be provided from this fund, it was certain that the old abuses in chher management could not be eradicated. Finally, it was urged that it was impossible to expect Government to supply the money necessary for the due improvement and extension of these Canals, unless an adequate guarantee for the successful management of the Canals was provided by skilled engineering management. The new outlay having been reduced to Rs. 29,000 per annum, the Government acceded to these representations. The detailed application of the new system has apparently not yet been worked out; that is to say, the detailed rules for the management of the Muzaffargarh Canals are still under consideration. But I hope the main lines of the proposals which ultimately secured the appointment of an Executive Engineer to these Canals will not be lost sight of. These were, that the control of the higher Engineer Officers of the Irrigation Department should be confined strictly to matters, of which as Engineers they are necessarily the sole and proper judges; that in respect of all other matters the control of the Deputy Commissioner should remain intact, the Executive Engineer being, on the one hand, distinctly subordinated to him, and on the other hand, receiving the same assistance from the Deputy Commissioner's Revenue establishment and from the village Revenue Officers, as the Deputy Commissioner received when no Canal Execu-

tive Engineer had been appointed. If these principles are lost sight of, then, as demonstrated by the Chief Engineer at the time when the proposals were submitted to Government, the cost of the skilled management will be doubled, and the district (as apprehended by the landowners) will be harassed by a double Revenue establishment. No doubt (I am quoting the Financial Commissioner's remarks) this association of the Canal Officer with the Deputy Commissioner may not be without its practical difficulties; but if the Deputy Commissioner and the Canal Officer are thoroughly in earnest in their desire to work in harmony, these difficulties will be overcome. And the Commissioner and the Superintending Engineer will have to be on the watch that departmental jealousy is not allowed to interfere with the working of the new system. Mr. Lyall further remarked on the same occasion that the proposed system is undoubtedly the proper way of working canals like those of Muzaffargarh in an efficient and yet economical manner; and that an immense waste of power is involved in excluding the Revenue authorities of the district and their establishments from rendering assistance in the administration of canals, to which about half the district agriculture may be said to owe its very existence.

See Chief Engineer's memorandum dated 4th July 1879, enclosed in Joint-Secretary's (Irrigation Branch) No. 068, dated 4th July 1879, to the Settlement Secretary to Financial Commissioner.

Settlement Secretary to Financial Commissioner's No. 4530, dated 30th June 1879, to Joint-Secretary to Government, Punjab, Irrigation Branch, paragraph 7.

Results of the new canal administration.

14. The results of the new system are so far most encouraging. The following statement of the areas recently irrigated has been furnished to me by the Deputy Commissioner (Mr. O'Brien) with these remarks:—

Paragraph 6 of Secretary to Government, Punjab, No. 903, dated 18th August 1881.

"The canal area was measured only twice before the canals were transferred, *viz.*, at settlement and in 1879-80. The canal area according to the settlement measurements was 909,006, but these figures show a larger area than ever was irrigated in a single year, because at settlement all land which had recently received canal water, or which had canal cuts leading to it, was recorded as canal-irrigated, though the whole of it was never irrigated in any one year. The settlement area may, however, be taken as a standard. If irrigation falls below it, it may be assumed that the canals are not working well. Any increase on the irrigated area of settlement may be taken credit for as due to improved canal management.

Deputy Commissioner's No. 414, dated 12th April 1882.

"After settlement the canal area was first measured in 1879-80. It amounted to 180,813 acres. This was the last year of the Deputy Commissioner's management.

"In March 1880, the canals were made over to the Canal Department. The following is the result:—

			Acres.
1880-81	...	...	208,958
1881-82	...	...	219,130

"In 1880-81 the area actually irrigated in that year was within a fraction of the settlement area, which was exaggerated, as already shown.

"In 1881-82 the canal area was 10,124 acress in excess of the settlement area.

"These figures are very satisfactory. There has been besides an almost complete cessation of the complaints about insufficient and irregular irrigation which used to be very numerous."

Tahsil.	Canal Area.			
	According to settlement measurements.	1879-80, Girdáwari.	1880-81, Girdáwari.	1881-82. Girdáwari.
	Acres.	Acres.	Acres.	Acres.
Muzaffargarh ...	99,989	94,284	102,855	101,432
Sanawán ...	58,305	29,846	41,999	54,105
Alípur ...	50,712	56,683	64,104	63,593
Total ...	209,006	180,813	208,958	219,130

Similarly, a year previous another Deputy Commissioner, Mr. Gladstone, wrote in his annual report for 1880-81:—

"There is no doubt that canals in this district are improving. In fact this year I myself have observed, though the rivers are not high yet, the canals are full and running to waste. The people simply cannot use all the water. Great care has been spent by the Executive Engineer and his able Deputy Collector, Báshir Ahmed, in giving the canals good heads and proper slopes. The result is that the canals are just running a little too well. What we want now is drainage. It will be remembered that along the road from Khángarh to Alipur there is a succession of low bits of land filled with water, and connected in the high floods, but known by different names at different localities. These depressions have a winding course generally north and south. Though in high floods they are connected, and the surplus water runs into the Chenab, still in moderately high water they simply flood the

land about. As they receive the spill of several Chenab canals and a large number of Sind canals, the question of their drainage is a very serious one. First, on account of communications, *e.g.*, roads, bridges; second, on account of the swamping of lands rendering them water-logged and sour. The Canal Officers have connected these depressions by a series of straight drainage cuts. This has been most successful so far, and carries off ordinary water into the Chenab admirably and with a high velocity. But probably in consequence of want of funds the work has been carried out on a small scale, possibly experimentally. From observation I am inclined to think that the drainage cuts could not carry off all the flood water, and that next year the drainage works will have to be much extended. The cost will probably be little or nothing, the chhers being sufficient. In fact, it would be all the better if next year a little less clearance on some of the canals were executed, and the labour transferred to the drainage.

"However, every thing cannot be done at once, and the Executive Engineer has done wonders in improving his canals. The people are struggling to break up and clear every available acre. Any one going to Alipur will see stumps being removed and jungle cleared in every direction. The Sanawan canals, formerly a rock ahead in the material progress of the district, are running admirably, and will probably run till November* * * "* * Chher system—The chher system may have excited jealousy at first; if it did it does not exist now. In going through Sanawán, Muzaffargarh and Alipur. no petitions were presented of any hardship connected with chhers. The work done by the chhers seems to be good and neat. In fact I think the chhers now feel like factory hands with participation in the profits."

* * * * * *

Conclusion.

15. I have endeavoured in the above paragraphs to show that, although owing to the shortcomings of the previous settlement and antecedent revenue administration and the consequent general absence of prosperity in the district at the time when settlement work was commenced, Mr. O'Brien's operations have not secured any material increase to the Government's Revenue, he is entitled to the credit of having applied to the pre-existing revenue system such corrections as were required by the peculiar circumstances of the district; and he has probably laid the foundation of no little prosperity among the people and of a considerable future enhancement of Government Revenue.

Term of settlement, para. 18 of Chapter, VII. Secretary, Government Punjab's No. 903, dated 18th August 1881.

16. After the report had been written, Government fixed the term of settlement for the whole district at 20 years. The engagements had already been taken for that term. Having regard to the large remissions of revenue that were granted in the first 12 years of our rule, none of which have been recovered at the present settlement, and looking to the probable extension of cultivation and canals and to the general improvement in prosperity that is likely shortly to occur, it would, I think, be a mistake to allow a longer lease on the present occasion,

17. Mr. O'Brien was more fortunate in his principal subordinates than some of his contemporaries in settlement employ. Of the three Superintendents both Bhagwán Dás, Superintendent of Sananwan, and Shekh Súba, Superintendent of Muzaffargarh, deserve commendation.

Notice of Officers.

Kázi Ghulám Murtaza the Extra Assistant Settlement Officer for the last 5 years of the settlement also deserves much praise.

Mr. O'Brien's own works deserve the warm acknowledgments of Government; but this is a matter which I can confidently leave in the hands of Mr. Lyall under whose supervision most of the work was done.

Referred to in Settlement Commissioner's N.o 340, dated 2nd December 1882, to the address of the Senior Secretary to Financial Commissioner, Punjab.

The 21st March 1882.

No. 94.—*Notification.*—Under the powers conferred upon him by Section 50 of the Punjab Laws Act (No. IV of 1872), the Lieutenant-Governor of the Punjab is, with the previous sanction of the Governor-General in Council, pleased to make the following rules under Section 48 of the same Act, for the management of the lands owned by Government in the Muzaffargarh District, which are specified in the schedule attached to the rules:—

1. No person shall pasture cattle, or cut wood or grass, or gather fuel or any spontaneous produce in the above-mentioned lands except—

(1) under the authority of a license granted by the Deputy Commissioner of the district, or

(2) with the permission of the farmer to whom any such privileges are for the time being farmed by the Deputy Commissioner of the district.

2. Every such license shall be in writing and signed by the Deputy Commissioner and license-holder, and shall state—

(*a*) the nature, extent and duration of the rights thereby conferred;

(*b*) the consideration paid, or to be paid, by the license-holder;

(*c*) the special conditions, if any, on which the license is granted.

3. Every farming lease granted under rule 1, clause (2), shall state the particulars mentioned in rule 2, and shall include—

(*a*) in cases where the consideration money is payable by instalments, the amount of the said

instalments, and the dates on which they will fall due; and

(*b*) in cases where the lease relates to the right of grazing, a specification of the maximum grazing dues which the farmer may levy and a promise on his part not to levy from graziers any dues except such as are specified in his case.

4. License-holders and all persons acting under the permission of a farmer shall comply with the conditions so specified, and every farmer shall observe and enforce the conditions entered in his lease.

5. If any license-holder or farmer, or person acting under permission of a farmer, fails to observe the conditions on which the license or lease was granted, the Deputy Commissioner may at his discretion cancel the said license or lease, and in such case the license-holder or farmer, and all persons acting under the said farmer, shall forfeit all claims to any produce or wood which at the time of the cancellation of the license or lease has not been removed from the land to which the license or lease applies. The said license-holder or farmer shall not be liable for any fees outstanding on the produce or wood so forfeited; but he shall have no claim to refund of dues already paid, and he shall not be thereby discharged from his liability for the payment of other dues in arrears, or of instalment overdue by the terms of his lease at the date of the forfeiture.

6. (1) Persons pasturing cattle, or cutting grass, or wood, or gathering fuel or other spontaneous produce contrary to the provision of rule 1; and

(2) any farmer or his agent levying grazing dues at higher rates than those fixed in the lease, or acting in contravention of the special conditions, if any, contained therein; and

(3) any license-holder acting contrary to any of the conditions specified in his license shall be liable on a first conviction to simple imprisonment for one month, or to fine not exceeding Rs. 100, or to both, and, on a subsequent conviction under this rule within three years of the first, to imprisonment not exceeding six months, or to fine not exceeding Rs. 300, or to both.

List of Rakhs which will be managed by the Deputy Commissioner, &c.—(continued).

District.	Parganah.	Name of Rakh.	Area in acres.	Direction.	Boundaries.
Muzaffargarh ...	Muzaffargarh ...	Harpallo ... هر پلو	467	South of Muhammadpur.	*North.*—Village lands of Muhammadpur. *South.*—Village lands of Harpallo. *East.*—Village lands of Harpallo and Muhammadpur. *West.*—Village lands of Hassanpur.
Ditto ...	Ditto ...	Chatwahan ... چٹواھن	468	South-west of Umarpur.	*North.*—Village lands of Muhammadpur. *South and West.*—Village lands of Chatwahan. *East.*—Village lands of Chak Nahiwála and Muhammadpur.
Ditto ...	Ditto ...	Muhammad Pakhsh Khádar. محمد بخش کہادر	547	South of Muhammad Bakhsh Khádar.	*North.*—Village lands of Muhammad Bakhsh Khádar. *South.*—Village lands of Umar Budh and lands of Tahsíl Sanawan. *East.*—Village lands of Muhammad Bakhsh Khádar. *West.*—Village lands of Muhammad Bakhsh Khádar and lands of Tahsíl Sanawan.
Ditto ...	Ditto ...	Ahmad B ri ... احمدبری	329	North of Ahmad Bari.	*North, South and East.*—Village lands of Fazil Kalru. *West.*—Village lands of Ahmad Bari.

Ditto ...	Ditto ...	Umar Budh ... عمر بده	312	North of Umar Budh.	*North, East and West.*—Village lands of Fazil Kalru. *South.*—Village lands of Umar Budh.
Ditto ...	Ditto ..	Bet Ludda ... بيت لڈه	1,082	East of River ...	*North.*—Rakh Sarkár Karimdád Kuraishi under Forest Department. *South.*—Village lands of Bet Walidád Khulang. *East and West.*—Village lands of Bet Ludda.
Ditto ...	Ditto ...	Ahmad Mohána ... احمد موهانه	2,285	Ditto.	*North.*—Village lands of Ahmad Mohana. *South and West.*—River Indus. *East.*—Village lands of Ahmad Mohána.
Ditto ...	Ditto ...	Rakh Sarkár, alias Muhammad Daha. رکهه سرکار	1,360	North of Kinjar ...	*North.*—Village lands of Chibbhar Khor and Kamal Kurai. *South.*—Village lands of Basti Lunda. *East.*—Village lands of Mír Háji and Basti Jahr. *West.*—Lands of villages Seri Kacha Samana, Dona and Basti Lunda.
Ditto ...	Ditto ...	Basti Jahr ... بستي جهڑ	859	North-east of Kinjar ...	*North.*—Village lands of Mír Háji. *South and West.*—Village lands of Basti Jahr. *East.*—Village lands of Goran Bagrain, Gházi Gopang, Ahmad Patafi, Maluk Chaunar, Palia Kalru.
Ditto ...	Ditto ...	Bet Qáim Shah ... بيت قايم شاه	1,232	East of River Indus.	*North and East.*—Village lands of Bet Qáim Shah. *South.*—Lands of villages Mando and Bet Chin. *West.*—Village lands of Bhindi Subman Shah.
Ditto ...	Ditto ...	Khulang ... کهلنگ	1,601	South of Khulang.	*North.*—Village lands of Khulang. *South.*—Village lands of Ghialpur. *East.*—Village lands of Khulang and Ghialpur. *West.*—Village lands of Mando.

List of Rakhs which will be managed by the Deputy Commissioner, &c.—(continued).

District.	Parganah.	Name of Rakh.	Area in acres.	Direction.	Boundaries.
Muzaffargarh ...	Muzaffargarh ...	Harpallo ... هر پلو	467	South of Muhammadpur.	*North.*—Village lands of Muhammadpur. *South.*—Village lands of Harpallo. *East.*—Village lands of Harpallo and Muhammadpur. *West.*—Village lands of Hassanpur.
Ditto ...	Ditto ...	Chatwahan ... چٹواہن	468	South-west of Umarpur.	*North.*—Village lands of Muhammadpur. *South and West.*—Village lands of Chatwahan. *East.*—Village lands of Chak Nahiwála and Muhammadpur.
Ditto ...	Ditto ...	Muhammad Pakhsh Khádar. محمد بخش کہادر	547	South of Muhammad Bakhsh Khádar.	*North.*—Village lands of Muhammad Bakhsh Khádar. *South.*—Village lands of Umar Budh and lands of Tahsíl Sanawan. *East.*—Village lands of Muhammad Bakhsh Khádar. *West.*—Village lands of Muhammad Bakhsh Khádar and lands of Tahsíl Sanawan.
Ditto ...	Ditto ...	Ahmad B ri ... احمدبری	329	North of Ahmad Bari.	*North, South and East.*—Village lands of Fazil Kalru. *West.*—Village lands of Ahmad Bari.

		Pindi Kalan.
		North.— Village lands of Umar Bukh.
		East.— Bakh Pakdir Kurdmahal Kurahil Hindu Burial Department.
		West.— Village lands of Sheikh Walidad Khan.
Ahmad Wahdna		North and West. Village lands of Bet Landia.
		South Village lands of Ahmad Mohana.
Bakh Mezhdir alias Mir Muhammad Dakha		East and West Village lands of Ahmad Mohana.
	North of Mirjat	South Village lands of Chilchhar River and Mirjat Kharal.
		East Village lands of Pindi Landia.
		West Village lands of Mir Hajji and Pindi Landia.
	North east of Mirjat	North Lands of village Pind Kacha Mamun, Dosa and Pindi Landia.
		South Village lands of Mir Hajji Pindi Landia.
		East and West Village lands of Pindi Landia.
	East of River Indus	North Village lands of Ghulam Rasul, Ahmad Fateh, Malik Chanan, Fakir Kalan.
		South and East Village lands of Bet Qalan Shah.
		West Lands of villages Mando and Bet Qalan.
	South of Khulang.	North Village lands of Bhindi Sahman Shah.
		South Village lands of Khulang.
		East Village lands of Ghulam Rasul, Ahmad Fateh, Malik Chanan, Fakir Kalan.
		West Village lands of Khulang and Gulajpur, Lands of Mando.

List of Rakhs which will be managed by the Deputy Commissioner &c.—(continued).

District.	Parganah.	Name of rakh.	Area in acres.	Direction.	Boundaries.
Muzaffargarh ...	Muzaffargarh ...	Málikpur ... مالك پور	722	South of Málikpur ...	*North, east and west.*—Village lands of Málikpur. *South.*—Village lands of Jahr Ratheb, in tahsíl Muzaffargarh, and village lands of Bakaini, tahsíl Alípur.
Ditto ...	Ditto ...	Hasanpur Kacha ... حسن پور كچه	1,321	West of Mehra ...	*North.*—Village lands of Metla and Basti Jhangar. *South.*—Village lands of Hasanpur Kacha. *East.*—Lands of villages Basti Jhangar, Hasanpur and Hasanpur Kacha. *West.*—Lands of villages Sijra and Taror, Hasanpur.
Ditto ...	Ditto ...	Jahr Ratheb ... جهڑ رتهيب	372	North of Jahr Ratheb	*North.*—Village lands of Hasanpur Kacha. *South.*—Village lands of Jahr Ratheb. *East.*—Village lands of Gindi Khakhi. *West.*—Village lands of Manikpur.
		Total ...	77,747		
Ditto ...	Alipur ...	Bet Mír Hazár Khan... بيت مير هزار خان	2,365	Near the east bank of the Indus.	*North.*—Village lands of Bakaini. *South.*—Village lands of Bet Mír Hazár Khan. *East.*—Village lands of Bakaini and Bet Mír Hazár Khan. *West.*—Village lands of Bakaini, Forest Department rakh of Bet Daryas, village lands of Bet Mír Hazár Khan.

Ditto ...	Ditto ...	Belawala ... بیلہ والہ	962	West of Belawala ...	*North.*—Village lands of Shahal Khan. *South and east.*—Village lands of Belawala. *West.*—Village lands of Bhindi Kura and Belawala.
Ditto ...	Ditto ...	Mela Chacha, 1st plot میلہ چچہ ٹکڑہ اول	493	North of Bet Khanwala	*North.*—Village lands of Bet Hazári. *South and west.*—Village lands of Mela Chacha. *East.*—Dinga Kurai.
Ditto ...	Ditto ...	Ditto 2nd plot ایضا ٹکڑہ دویم	...	...	*North.*—Village lands of Bet Hazári. *South.*—Village lands of Bet Khanwala. *East.*—Village lands of Mela Chacha. *West.*—Village lands of Mela Chacha and Belawala.
Ditto ...	Ditto ...	Bet Bágh Shah ... بیٹ باغ شاہ	3,745	East of River Indus ...	*North.*—River Indus. *South.*—Village lands of Bet Diwan Sahib. *East.*—Village lands of Bet Bágh Shah and Bet Diwan Sahib. *West.*—River Indus and village lands of Bet Diwan Sahib.
Ditto ...	Ditto ...	Thal Meghraj Sharqi... تھل میگھراج شرقی	3,565	East of Thal Meghraj	*North.*—Village lands of Shahpur and Bet Diwan Sahib *South.*—Village lands of Bhambhri and Thal Meghraj. *East.*—Village lands of Amirpur and Bhambhri. *West.*—Village lands of Thal Meghraj.
Ditto ...	Ditto ...	Ditto Gharbi... ایضا غربی	676	East of River Indus ...	*North.*—Village lands of Bet Diwan Sahib. *South.*—Village lands of Bet Mir Ahmad Jhabel. *East.*—Lands of villages Thal Meghraj, Wawat and Bet Mir Ahmad Jhabel. *West.*—River Indus.

List of Rakhs which will be managed by the Deputy Commissioner, &c.—(continued).

District.	Parganah.	Name of rakh.	Area in Acres.	Direction.	Boundaris.
Muzaffargarh ...	Alipur ..	Kohr Pírán ... کوهر پیران	584	East of Kohr Pírán ...	*North.*—Forest Department rakh of Khanwah. *South.*—District rakh of Muhib Shah. *East.*—Village lands of Chandia. *West.*—Village lands of Daulatpur and Kohr Pírán.
Ditto ...	Ditto ..	Muhib Shah ... محب شاہ	640	North of Muhib Shah	*North.*—Village lands of Kohr Pírán. *South.*—Village lands of Muhib Shah. *East.*—Village lands of Chandia. *West.*—District rakh of Kherpur Pára and village lands of Muhib Shah.
Ditto ...	Ditto ...	Kherpur Pára, 1st plot خیر پور پاڑہ ٹکڑہ اول	987	East of River Indus ...	*North and south.*—Village lands of Kherpur Pára. *East.*—Village lands of Kohr Pírán and Kherpur Pára. *West.*—River Indus.
Ditto ...	Ditto ...	Ditto, 2nd plot ایضا ٹکڑہ دویم	...	...	*North, east and west.*—Village lands of Kherpur Pára. *South.*—Village lands of Báqar Shah Janúbi.
Ditto ...	Ditto ...	Ditto, 3rd plot ایضا ٹکڑہ سویم	...	...	*North, south and west.*—Village lands of Kherpur Pára. *East.*—Village lands of Muhib Shah.
Ditto ...	Ditto ...	Báqar Shah Janúbi ... باقر شاہ جنوبی	2,338	North-east of Báqar Shah,	*North.*—Lands of villages of Chandia, Nusratpur and Muhib Shah.

						South.—Village lands of Báqar Shah and Dhaka. *East.*—Village lands of Nusratpur, Parara. *West.*—Village lands of Muhib Shah and Báqar Shah.
Ditto	...	Ditto	...	Chandia چاندیه	...	168	West of Kotli Lal ...	*North.*—Village lands of Khanwah. *South and west.*—Village lands of Chandia. *East.*—Village lands of Kotli Lal and District rakh of Kotli Lal.
Ditto	...	Ditto	...	Tibba Núr Gopáng ٹبہ نور گوپانگ	...	991	West of River Chenab	*North.*—Village lands of Bet Isa and Dhaka. *South.*—Village lands of Tibba Núr Gopáng. *East.*—River Chenab. *West.*—Village lands of Dhaka and Tibba Núr Gopáng.
Ditto	...	Ditto	...	Kotli Lal کوٹلي لعل	...	599	South of Kotli Lal ...	*North.*—Village lands of Kotli Lal and Khanwah. *South.*—Village lands of Nusratpur and Chandia. *East.*—Village lands of Kotli Lal. *West.*—Village lands of Chandia and District r kh Chandia.
Ditto	...	Ditto	...	Sirki سرکي	...	570	South of Sirki ...	*North.*—Village lands of Sirki. *South.*—Village lands of Kotli Lal. *East.*—Village lands of Sirki and Khanpur Naraka. *West.*—Village lands of Khanwah and Kotli Lal.
Ditto	...	Ditto	...	Langarwah لنگرواہ	...	868	South of Langarwah...	*North.*—Village lands of Langarwah. *South.*—Village lands of Kundai. *East.*—Village lands of Langarwah and Missan Kot Bhua. *West.*—Village lands of Langarwah.
Ditto	...	Ditto	...	Missan Kot Bhua مسن کوٹ بھوا	...	272	In the midst of Mauza Missan Kot Bhua.	*North, south, east and west.*—Village lands of Missan Kot Bhua.

List of Rakhs which will be managed by the Deputy Commissioner, &c.—(continued).

District.	Parganah.	Name of rakh.	Area in Acres.	Direction.	Boundaries.
Muzaffargarh ...	Alipur ...	Khanáni ... خنالي	769	West of Khanáni ...	*North and west.*—Village lands of Sultánpur. *South.*—Village lands of Shikháni. *East.*—Village lands of Chanáni.
Ditto ...	Ditto ...	Sultánpur ... سلطان پور	562	West of Ghiri ...	*North.*—Village lands of Ghiri and Sultánpur. *South and west.*—Village lands of Sultánpur. *East.*—Village lands of Ghiri.
Ditto ...	Ditto ...	Basti Arif ... بستي عارف	1,632	South of Basti Arif ..	*North.*—Village lands of Basti Wain and Basti Arif. *South and west.*—Village lands of Shahbázpur. *East.*—Village lands of Kast Wains, Jhallárin and Shahbázpur.
Ditto ...	Ditto ...	Hamzewáli ... همزه والي	2,225	West of Gagrewáli ...	*North.*—Lands of villages Chak Kotla Gámun and Hamzewáli. *South.*—Village lands of Madwála and Forest Department rakh of Madwála. *East.*—Village lands of Gagrewáli. *West.*—Village lands of Basti Wain and Jhallárin.
		Total ...	25,510		

Ditto	...	Sanawan	...	Rakh Thalwáli تهل والي	...	113,601	East of Pirhar Munda	*North.*—Lands of tahsíl Leiah in Dera Ismail Khan District, and village lands of Chak Aráín Sharqi in tahsíl Sanawan. *South.*—Lands of tahsíl Muzaffgargarh. *East.*—Village lands of Patt I Janúbi in tahsíl Sanawan, lands of village Wandar, Patti Sultán Mahmúd and Patti Ghulám Alí Gharbi in tahsíl Sanawan, and lands of tahsíl Muzaffargarh. *West.*—Lands of villages Aráín Sharqi, Pattai Chak, Janúbi, Pirhar Munda, Wandar, Patti Sultán Mahmúd and Patti Ghulám Alí Gharbi, Patti Naich and Patti Khar.
Ditto	...	Ditto	...	Patti Siál پٹي سيال	...	5,430	North of Patti Siál ...	*North.*—Lands of tahsil Leiah in Dera Ismail Khan District. *South.*—Lands of villages Patti Siál, Mírpur and Pattal Janúbi *East.*—Village lands of Patti Siál. *West.*—Village lands of Tibba and district rakh Tibba.
Ditto	...	Ditto	...	Ahsánpur احسان پور	...	2,512	East of Ahsanpur ...	*North.*—Lands of tahsíl Leiah in Dera Ismail Khan District. *South.*—District rakh of Tibba, and village lands of Hinjrái. *East.*—Lands of tahsíl Leiah and District rakh of Tibba. *West.*—Village lands of Ahsanpur.
Ditto	...	Ditto	...	Tibbawáli ٹبه والي	...	13,767	East of Dairadínpanah	*North.*—District rakh of Ahsanpura and lands of tahsíl Leiah in Dera Ismail Khan District. *South.*—District rakh of Pattal Kot Adu. *East.*—Village lands of Tibba, District rakh of Siálwali and village lands of Patti Siál, Mirpur, Marchun Chak Gharbi. *West.*—District rakh of Ahsánpur and village lands of Hinjrái and Tibba.

List of Rakhs which will be managed by the Deputy Commissioner, &c.—(concluded).

District.	Parganah.	Name of rakh.	Area in Acres.	Direction.	Boundaries.
Muzaffargarh ...	Sanawan ...	Pattal Kot Adu ... پتل کوٹ ادو	7,835	North-east of Kot Adu	*North.*—District rakh of Tibba and village lands of Tibba. *South.*—District rakh of Pirhár Sharqi. *East.*—Talai Nur Shah. *West.*— Village lands of Pattal Kot Adu and District rakh of Kot.
Ditto ...	Ditto ...	Pirhár Sharqi .. پرهار شرقي	3,024	Ditto ...	*North.*—District rakh Pattal Kot Adu. *South.*—Talai Chadhar. *East.*—District rakh of Pattal Kot Adu. *West.*—District rakh of Kot, village lands of Kot and Pirhár Sharqi.
Ditto ...	Ditto ...	Katwáli ... کٹوالي	550	Ditto ...	*North.*—Village lands of Pattal Kot Adu. *South.*—Village lands of Kot and District rakh of Pirhár Sharqi. *East.*—District rakh of Pattal Kot Adu. *West.*—Village lands of Pirhár Sharqi.
Ditto ...	Ditto ...	Drigwáli ... درگه والي	1,971	East of Drig ...	*North.*—Village lands of Talai Chadhar. *South.*—Village lands of Lál Mír. *East.*—Village lands of Shádi Khan, Munda. *West.*—Lands of villages Kotha, Hala, Drig.

Ditto ...	Ditto ...	Sában Máchi ... صابن ماچهي	1,882	East of River Indus ...	*North.*—Village lands of Kuluwála. *South.*—Forest Department rakh Isanwála and village lands of Isanwála and District rakh of Bhatti Metlawáli *East and west.*—Village lands of Sában Máchi.
Ditto ...	Ditto ...	Bhatti Metlawáli ... بهٹي ميٹلا والي	1,028	Ditto ...	Under water.
Ditto ...	Ditto ...	Rakh Kullewáli ... کلي والي	401	Ditto ...	*North.*—Lands of Láchi Gurmani. *South.*—Lands of Kullewáli and Sijhalwáli. *East.*—Lands of Sihajwáli. *West.*—Lands of Kullewáli and Shamba Márkanda.
	Total Tahsíl ...	Sanawan ...	151,968		
		GRAND TOTAL ...	255,225		

Proceedings of the Hon'ble the Lieutenant-Governor, Punjab, in the Department of Revenue and Agriculture (Revenue),—No. 230, dated 11th November 1885.

READ—

The Settlement Report of the Muzaffargarh District by Mr. E. O'Brien, C.S., late Settlement Officer, Muzaffargarh, dated 7th April 1881.

Letter from Commissioner of Settlements and Agriculture, to Senior Secretary to Financial Commissioner, No. 340, dated 2nd December 1882, forwarding the same.

Letter from the Senior Secretary to Financial Commissioner, No. 687, dated 1st June 1883, submitting the above Report and letter.

RESOLUTION.—The Muzaffargarh District is bounded on the east by the Chenab, on the west by the Indus, and on the north by the southern portion of those parts of the Dera Ismail Khan and Jhang Districts which lie between these rivers. In shape it resembles a long narrow triangle, of which the base rests on the northern boundary and the apex is situated at the extreme southern point at the junction of the two rivers. With the exception of the sandy Thal lying to the north on higher ground all the lands comprised in the district are composed of an alluvial soil of recent formation, intersected by old channels of the rivers and canals, and more or less liable to annual inundations, of which those from the Chenab are nearly always beneficial, while those from the Indus often do as much harm as good. The Thal is a sandy desert fairly level in the west, but ending in a confused mass of ridges and hillocks on the east. The tract slopes downwards from the Indus to the Chenab, and the latter river lies 37 feet lower than the former on the northern border of the district: at no very distant date the Indus appears to have flowed down the centre of the Thal. This tract forms the principal grazing ground of the country, and as soon as the rain falls each year excellent grass springs up all over it. Unlike the wastes of Thal and Bár in other districts, it is dotted over with plots of cultivation in most parts, and immense tracts destitute of cultivation are rarely met. Part of the lowland is annually covered by the river floods, and part is protected by embankments and irrigated by inundation canals, which usually run from April to September. The district is thus divided into three natural zones,—the Thal, the canal country, and the alluvial tracts. The total area is 3,137 square miles. Subject as so much of the land is to the action of the rivers, the cultivated and

culturable area necessarily varies from year to year. According to the measurements of the last settlement, the cultivated and fallow area amounted to 24 per cent., and the culturable to 46 per cent. of the whole. The average rain-fall is only 6 inches, and nearly the whole of the cultivation is therefore dependent on irrigation of some kind. About 120,000 acres are inundated by the rivers, and about 200,000 acres are irrigated by canals alone, or by canals assisted by wells. An excellent description of the canals and of the embankments by which the canal tracts are protected from the river floods is given by the Settlement Officer in pages 14—24 of his Report. Only in the higher parts of the central Thal are wells used unassisted by canals; and the area irrigated by wells alone is only 24,632 acres. The district is divided into three tahsíls, of which Sinánwán lies to the north, Muzaffargarh in the centre, and Alípur at the south. The only other fact connected with the physical advantages of the district which calls for notice is that the soil is peculiarly suited for date trees, of which the fruit forms the staple food of the people in July and August. An interesting account of the trees, fodder plants and fauna of the district is given by the Settlement Officer in pages 27—43 of the Report.

2. In early times Muzaffargarh was held by Sumra and Summa Rájpúts and after them by the local dynasties of the Langás and Náhars, the latter of whom ruled for nearly 300 years in Sítpur. Towards the end of the 18th century the country was divided between the rulers of the neighbouring tracts. The northern portion was held by the Thal Nawábs, of whom Muhammad Khán of Mankera was the most notable; the eastern part was under Muzaffar Khán, Governor of Mooltan, who founded the town of Muzaffargarh; the west was controlled by the rulers of Dera Gházi Khan; and the south by the Nawábs of Baháwalpur. It was not until Díwán Sáwan Mal was appointed Governor of Mooltan by Mahárája Ranjít Singh in 1829 A. D. that the whole district came under a single ruler. Mr. O'Brien's Report contains an excellent account of the method of government adopted by the Díwán. His assessment was undoubtedly heavy, and where the actual revenue was light the amount was made up by levying extra cesses; while if the revenue was heavy the cesses taken were few. Nevertheless his rule was popular and is remembered with affection by the people to the present day. The principal reasons of this are that

the Díwán insisted on every one having his rights, and took care to improve and extend irrigation, and to maintain the dams which are so necessary for the safety of the cultivated lands and the proper working of the canals.

3. The population of the district according to the census of 1881 consisted of 338,605 persons, of whom seven-eighths are Muhammadans. The rate of population per square mile of cultivation is 447, but the incidence per square mile of the total area is only 108. About half the land is owned by Játs, and the remainder by Bilúches, Syads, Kiráṛs and others. The Játs really represent a whole congeries of various tribes, and are even held to include Rájpúts. Certain tribes, such as the Jhabels, whose origin is from Sindh, Mors, Kihals, Kutáwas and Labánas, are to a large extent peculiar to the district. The people are fair agriculturists, but they are also among the most superstitious in the whole of the Punjab, and their standard of morality is lamentably low.

4. The tenures of Muzaffargarh resemble those of the Cis-Indus portion of the neighbouring district of Dera Ismail Khan. There are superior proprietors who take certain dues from the inferior proprietors, and enjoy special rights in the waste lands, and inferior proprietors who are the real holders of the land and the revenue payers. The former are in many cases the descendants of persons who occupied large grazing tracts at the time when most of the district lay waste; they are known to the people as zamíndárs and mukaddams, and in the Government record as málikán ála. The dues paid to them by the inferior owners amount to Rs. 1-12-0 per cent. on the land revenue; in some cases they also levy an institution fee, jhuri, when land is broken up. The inferior proprietors, formerly called riáya or chakdárs (from the wells sunk by them), but now known as málikán adna, received their lands either from the superior proprietors on payment of a small fee, or obtained grants direct from the rulers of former times, who encouraged the extension of cultivation without much regard to the rights of any prior claimants. The present settlement has been made with the inferior proprietors in every case. The estates are usually mere collections of wells without any connection with each other, grouped together into villages for administrative convenience, in the same way as the villages were grouped into talúkas for revenue purposes.

5. Until the time of Díwán Sáwan Mal, the revenue was usually collected in kind, but that ruler introduced the system of commuting the Government share of the crop into cash at a rate usually 25 per cent. above the market price, and requiring the cultivators to take it back and pay the value of it into the treasury. The share of the crop taken by the Sikh Government, mahsúl, varied from one-sixth to one-half. Where it was small, the amount, as already explained, was made up by cesses; where it was large, the cesses imposed were light. An interesting list of the cesses levied will be found at page 86 of the Report. Certain crops were assessed at cash rates, and isolated wells unassisted by the canals were often leased on a rental which was nominally fixed, but which was really enhanced in many indirect ways. In fact, the assessments were adjusted, as Mr. O'Brien points out, on a minute local knowledge of the capabilities of each well and estate; and hence it came to pass that a revenue demand which would now be considered exceptionally severe was, under the patriarchal system of administration adopted by the local rulers, paid by the people with comparative ease.

6. The rent realized by owners from their tenants, "lichh" or "kasúr," generally amounted to one-seventeenth of the gross produce; the remainder after payment of the Government revenue and all miscellaneous dues was called rahkam, and was taken by the actual cultivator of the land. The inferior proprietors now take both the "lichh" and the "mahsúl," and are directly responsible to the Government for the revenue. All trees of every kind were considered by the Sikhs to belong to Government, and the whole of the date crop was taken by the State. A poll tax was levied on artizans and cattle, and heavy town and transit dues were realized from traders. All these were done away with at annexation; and as the Government revenue now represents a much smaller share of the gross produce than the old "mahsúl" did, it might be expected that the proprietors would be better off than they used formerly to be. The Financial Commissioner shows, however, that, having been treated as children by Díwán Sáwan Mal, they fell into difficulties as soon as they were wholly released from leading-strings, and actually preferred the harder terms of the Sikh revenue system, under which Government aid was freely given to help the people to manage for themselves, to the easier conditions of the British Government, which left them

to direct their own affairs to an extent for which they were hardly fitted. No doubt the main reason of the inability of the villages to combine for corporate action lay in their constitution, in which the strong link of brotherhood, which is so characteristic of all communities in the Punjab, except in the south-western corner, was entirely wanting.

7. According to the returns of the recent settlement the area cultivated by tenants amounts to 169,000 acres, or to more than one-third of the total area under cultivation. On 97,000 acres rents in kind alone are paid, the rates being one-half in the case of 18,000 acres, one-third in the case of 45,000 acres, and one-fourth in the case of 30,000 acres. Tenants who have brought land under cultivation by clearing jungle (mundhimár and butimár) have, it is stated, usually been recorded as possessing occupancy rights, but no details are furnished by the Settlement Officer. Mr. O'Brien notes, however, that land is so abundant that the occupancy status has no attraction for tenants, and that they prefer not to be tied down to their holdings in any way.

8. A good description of the people, their superstitions and amusements is given by the Settlement Officer in Chapters III. and IV. of the Report, and the account of the agriculture of the district in Chapter V. is an excellent one. Wheat is grown on more than half the area under crops and forms the staple food of the people. According to the analysis of the various specimens of Punjab wheat which were forwarded to England for examination, the wheat of Muzaffargarh is among the best of the Province. Cotton occupies 8 per cent. of the cropped area, and indigo, jowár and peas about 6 per cent. each. The Lieutenant-Governor would be glad if the Director of Settlements and Revenue Records would take into consideration Mr. O'Brien's remarks on page 77, regarding the slovenly preparation of indigo, with a view to deciding whether it is not possible that some improvement should be effected in the method of manufacture.

9. Immediately after annexation a summary settlement was carried out by Captain Hollings in the north which was then attached to the Leiah District, and in the south by Mr. Wedderburn, Lieutenant Farrington and Lieutenant James. The fact that the cesses taken by the Sikhs had been levied at varying rates according to the incidence of the revenue was not recognised at that time, and their indiscriminate

remission caused the new revenue, which was based on the former collections of land revenue proper, to fall very unequally on different parts of the district. The people were unaccustomed to manage for themselves, and their embarrassments were greatly increased by the extraordinary fall in prices which took place shortly after 1849. The result was that the first summary settlement proved a disastrous failure. A second settlement was made in Tahsíl Sinánwán by Mr. Simson in 1854, and in the rest of the district by Captain Graham in 1857. The former gave a reduction of 10½ per cent., but Captain Graham increased the assessment, which was already oppressive, by 6 per cent. in Tahsíl Muzaffargarh, and 21 per cent. in Alípur. Even the reduced assessment of Sinánwán was found to be too heavy, and the settlement of the other two tahsíls completely broke down. Finally, a third summary settlement of the whole district was made in 1860 by Lieutenant Tighe. A further reduction was allowed in Sinánwán and Muzaffargarh, and in Alípur the assessment was put back to the amount at which it stood before the revision by Captain Graham. The revenue of each tahsíl then fixed was as follows :—

Muzaffargarh	...	...	...	Rs.	2,20,592
Alípur	...	...	...	„	1,41,042
Sinánwán	...	...	...	„	1,08,660
		Total	...	Rs.	4,70,294

Mr. O'Brien shows that this assessment would in all probability have worked well if sufficient attention had been paid to the clearance and repairs of the canals, if a new distribution of revenue in villages had been sometimes allowed, and if there had not been disastrous floods in 1871 to 1874. As it happened when the regular settlement was commenced in 1873 the progress made by the district since 1860 was found to have been wholly inadequate, and such as to justify only a very moderate enhancement of the land revenue.

10. The stability of the revenue administration of Muzaffargarh depends almost entirely on the proper working of the canals. This fact was not properly realized for many years, and it was not until the operations of the present settlement were in progress that steps were taken to place the subject on a satisfactory footing. After a full consideration

of the whole question it was decided that it was quite impossible for the Deputy Commissioner to give sufficient attention to the management of the irrigation arrangements of the whole district, and it was therefore determined to place them under the Irrigation Department of the Province. A new division of the Muzaffargarh canals was accordingly created and placed under an Executive Engineer, who, as regards their revenue management and the working of the *chher* system, is subject to the control of the Deputy Commissioner. The results of this change of system have been most satisfactory, thanks to the excellent work done by Mr. O'Brien, and Mr. Sibold, Executive Engineer, as may be seen from the figures given in the review of the Settlement Commissioner. For whereas the area irrigated by the canals in the last year of the old management was 180,813 acres only, two years afterwards it had risen to 219,130 acres, and in 1882-83 rose further to 249,400 acres. There is no doubt that canal irrigation in the Muzaffargarh District is capable of very great development, and the Lieutenant-Governor feels sure that no efforts will be spared to promote its extension in future. The subject of the *chher* clearances, and the important place which they hold in the district system of irrigation, will be noticed below.

11. The first regular settlement was begun in 1873, and was carried out entirely by Mr. E. O'Brien. The report submitted by that officer, though an excellent one in other respects, contains a very meagre description of the new assessment and of the date on which it was based. This is to be regretted ; though as the assessment reports of all the three tahsíls have been printed in full, it may be hoped that the omission will not cause any practical inconvenience to the local officers. The result of the settlement was as follows :—

	Old revenue.	*New revenue.*
	Rs.	Rs.
Land revenue... ...	5,04,970	5,24,468
Grazing	34,623	33,388
Dates	11,503	19,226
Total ...	5,51,096	5,77,082

The assessment was based principally on produce estimates. The yield of the chief crops was ascertained by careful enquiries and experiments, and their value was then

estimated on the basis of the average wholesale prices of the past 23 years. The owner's share of this value was next calculated in accordance with the system in force in the district, and half of this share was assumed as the standard of the Government assessment. Rates were then devised for the various classes of irrigation, and in accordance with these the revenue demand of each circle and estate was worked out. The process adopted by Mr. O'Brien is fully explained in his assessment reports and in the reviews of these, although the bare results only are stated in the final report. The assessment circles were framed with regard to the means of irrigation prevailing in them, and the average rates adopted for each class of irrigation were generally as follows :—

	Per acre.					
	Rs.	A.	P.	Rs.	A.	P.
Flooded lands	0	13	0 to	1	1	0
Flooded lands assisted by wells ...	0	14	0			
Lands irrigated by wells and canals	1	8	0 to	1	12	0
Lands irrigated by canals alone ...	1	4	0			
Lands irrigated by lift (jhalárs) ...	1	2	0 to	1	4	0
Lands irrigated by wells alone ...	1	2	0 to	1	4	0

Where lands irrigated by floods are also watered from wells, an additional lump assessment, varying from Rs. 6 to Rs. 9, was imposed on the latter. These rates were very carefully considered at the time, and Sir Charles Aitchison sees no reason to question their adequacy, due allowance being made for the precariousness of much of the irrigation, and for the danger to which the lands and wells are liable from sudden and severe floods.

The half net assets estimate, the assessment by revenue rates, and the revenue finally fixed for the district, are compared in the following table :—

Tahsil.	Half net assets estimate.	Assessment by revenue rates.	Revenue estimates fixed.
	Rs.	Rs.	Rs.
Muzaffargarh	3,25,499	2,52,135	2,51,302
Alípur	1,68,415	1,53,174	1,50,385
Sinánwán	1,33,341	1,19,604	1,22,781
Total ...	6,27,255	5,24,913	5,24,468

Adding to this Rs. 5,000 as the probable sum for which the Government rakhs will be leased, the total new revenue amounts to Rs. 5,82,082, giving an increase of Rs. 30,986 (not Rs. 32,986, as stated by the Settlement Officer), or rather less than 6 per cent. This is far below what might have been anticipated, and is due, as has been stated above, to the somewhat unsatisfactory revenue administration of the district in the past. Owing, however, to the fluctuating system of assessment, an increase of Rs. 25,000, as will be explained below, has already taken place over and above the demand estimated by the Settlement Officer. Taking this into account, the net increase of revenue derived from the present settlement amounts to 12 per cent. of the old demand.

12. The most important operations carried out by the Settlement Officer were—

(1). The revision of the rakh demarcation.

(2). The introduction of fluctuating assessments on lands subject to river floods.

(3). The arrangements for the proper management of the canals and more complete organization of the *chher* system.

(4). The arrangements for the future relief of estates in case of the failure of canal irrigation.

These subjects are fully dealt with by the Financial Commissioner in his review, and it will be sufficient to notice them very briefly in the present place.

13. The old rakhs had been demarcated on entirely wrong principles, and the hardships which were thereby entailed on the villagers necessitated a complete revision of the boundaries. The result of the new demarcation was to reduce the area of Government rakhs to less than one-third of that previously included within their limits, but the portion retained, amounting to 311,554 acres, is now entirely free of incumbrances. The rakhs are managed in accordance with rules drawn up under Section 48 of Act IV. of 1872 (The Punjab Laws Act), and the grazing revenue derived from them is already far greater than was realized under the old system.

14. Among the principal causes of the ill success which has attended the past settlements of the Muzaffargarh District has been the too great rigidity of the revenue system applied to the riverain lands. These, as explained by the Settlement Commissioner, are not really under the command of the cultivator; and in order to counteract the effects of the exceedingly capricious action of the rivers, it was decided to place these lands under a fluctuating assessment at the present settlement, as has been done in Bannu, Dera Ismail Khan and Mooltan, and in part of the Jhang District. Accordingly, the area subject to the influence of the floods is measured and assessed yearly, and so far the system has proved equally popular with the people and advantageous to the State, the revenue realized under it during the last four years having been Rs. 1,45,900, Rs. 1,48,800, Rs. 1,60,500, and Rs. 1,71,300. As the area in question comprises no less than 120,000 acres, the extra labor which is thrown on the subordinate revenue staff by the system is very great, and it has already been found necessary to strengthen the Kánúngo establishment and to appoint an additional Náib-Tahsíldár to assist in the work of the Sinánwán Tahsíl. Hitherto the working of the system has proved most successful. But the continuance of the present satisfactory state of things depends entirely on the efficiency of the revenue staff of the district, and the Lieutenant-Governor trusts that no efforts will be spared by the Commissioner of the Division and the District Officer to see that this staff is thoroughly acquainted with its duties, and that it performs them promptly and efficiently.

15. The irrigation from canals in Muzaffargarh may be termed fairly permanent in comparison with that from river floods, and it was not considered necessary to place the canal lands under a fluctuating assessment. Experience in the past in the Mooltan and Muzaffargarh Districts had shown, however, that it was desirable to lay down rules for the granting of remissions of revenue on occasions of failure of canal irrigation, and this has been accordingly done in both districts. The rules approved by the Local Government for the above purpose are detailed by the Settlement Commissioner in paragraph 11 of his letter recited in the preamble, and the present settlement is sanctioned subject to the observance of their provisions in all cases. Hitherto no remissions have been found necessary, and, as pointed out by the Financial Commissioner, the system has this advantage that a

decline in the revenue will immediately attract the attention of the higher Revenue authorities of the Province to the imperfect working of the canals. Lands to which canal irrigation may be extended hereafter will be charged at a rate of 6 annas per acre in the Sinánwán Tahsíl, and of 8 annas per acre in the other two tahsíls. A *pro formâ* credit of two-thirds of the assessment of lands watered by canals and wells, and of the whole of the assessment of lands watered by canals alone, is taken by the Irrigation Department; the whole of the income, however, is actually credited in the accounts as land revenue, and is shared under the present Provincial contract by the Supreme and Local Governments in the proportion of 60 and 40 per cent.

16. The annual clearances of the canals on which the prosperity of the district so greatly depends are effected by the people themselves under the direction of the officials of the Revenue and Irrigation Departments and of the Canal Committees. No charge, therefore, is made for the use of canal water over and above the demand on account of land revenue. A good description of the general features of the system of clearances called *chher* is given by the Settlement Officer at pages 100—102 of his Report. The most important points embodied in the *chher* rules, as finally revised and attached to this Resolution, are as follows. The total *chher* assessment of each canal will be fixed by the Divisional Canal Officer in September of each year in consultation with the Committee of the Canal. The assessment will be based for the most part on a consideration of past assessments, and will be expressed in the form of so much *chher* labor for each acre irrigated by the canals during the current autumn harvest and the ensuing spring harvest. For each canal a committee, or sarpanch, will be appointed. Every committee man must possess certain qualifications, and will be appointed for five years. Two-thirds of the number of the committee will be selected in the same way as Revenue Zaildárs, that is to say, with regard to the votes of the village headmen as well as to personal claims, and one-third may be appointed without taking votes. The duties of the committee men are to supervise the clearances of the canals, to keep a record of the laborers present at the work, and to help the Canal Officer generally in all matters connected with the administration of the canals. They are remunerated by a remission of *chher* labor due on account of their own land

irrigated by the canals. Each irrigator is bound to furnish labor at the place and time intimated to him, and if he fails to do so he is liable to pay a commutation fee of 8 annas per man per diem. These fees are credited to a canal fund known as the Zarinágha Fund, from the proceeds of which works for the improvement of the canals, but not original works, may be undertaken. Any irrigator can appeal against his assessment to *chher* labor, and may petition for remission of land revenue due to the canals when the canals have failed to work. If the number of laborers called out in the first instance is not sufficient to complete the work of clearance, a further levy of laborers may be made, but in that case the laborers called out are paid 4 annas per diem. Special calls for laborers may be made without payment on occasions of urgency during the irrigating season. It is not necessary perhaps to add more on the subject of *chher* labor in the present review. The whole facts of the case as regards the Mooltan District were reported to the Government of India in 1879, and in the letter of the Department of Home, Revenue and Agriculture, No. 408, dated 19th August of that year, the conclusion was accepted that the system was one peculiarly suited to the circumstances of the Punjab, and that it was most desirable to continue it, provided precautions were taken to prevent the recurrence of certain abuses which had crept into the working of the system in the past. The *chher* rules of the Mooltan District have since been formally approved by the Government of India. The rules for the Muzaffargarh District are based mainly upon these, but they have not hitherto been submitted to the Supreme Government. The reason of this is that there is much in the rules which was new as regards Muzaffargarh, and it was considered advisable that they should be worked experimentally before they were formally sanctioned. The rules have been accepted by the land-owners and irrigators of the district, and an entry has been made in the administration paper of each village by which the people have bound themselves to observe the conditions of them. The present settlement will accordingly be sanctioned subject to the observance of the above engagements.

17. Zaildárs were appointed throughout the district during the settlement; they are remunerated by a deduction of 1 per cent. from the land revenue, and by special ináms

aggregating Rs. 3,310. The assigned revenue is very small, as may be seen from the following table :—

	Rs.
Jágír	2,174
Máfis	1,405
Pay and ináms of Zaildárs	8,950
Total ...	12,529

The cess for the payment of Patwáris has been fixed at rates varying from 3 to 6 per cent. in different parts of the district. It is satisfactory to note that of 191 Patwáris, 120 are residents of Muzaffargarh, and that 42 come from the neighbouring districts. The Lieutenant-Governor fully concurs with the Settlement Officer that, provided the establishment of cliques be avoided, it is desirable that residents of the district should as far as possible be appointed to the post of Patwári.

18. The settlement lasted 7¼ years. If allowance be made, however, for the delay in communicating orders on the assessment reports, the duration was not in excess of that of most recent settlements, *viz.*, six years. The cost from Imperial Funds was Rs. 3,97,450, so that, estimating the increased revenue at Rs. 50,000 per annum, the expenditure will be recovered in eight years. The term of the settlement has already been fixed at 20 years in the orders of Government issued upon the assessment reports. Considering the very small increase in the cultivated area which has taken place since the beginning of British rule, and the very large culturable area which it may be hoped will be gradually brought under the plough as irrigation extends, Sir Charles Aitchison agrees with Sir Robert Egerton that it is not desirable to sanction the settlement for a longer period than 20 years. The settlement is accordingly sanctioned for that period, together with the record of rights, subject to the observance by the revenue payers (1) of the new rules for remissions of canal revenue, and (2) of the rules for the working of the *chher* system.

19. No mention is made by the Commissioner of Settlements and Agriculture, or by the Financial Commissioner, of the village note-books prepared at the late settlement. The Lieutenant-Governor will be glad to be assured that these were drawn up in a satisfactory manner, and that they have been duly maintained by the District Officer. His

Honor notices that it is stated by Colonel Wace that the settlement measurements were good, and that the record of rights has been well put together.

20. Sir Charles Aitchison agrees with the Financial Commissioner that Mr. O'Brien is entitled to the thanks of Government for a thorough and excellent settlement by which, there is every reason to hope, the future revenue administration of the district has been placed on a sound basis, and for a most interesting report. It is to be regretted that the report should show signs of incompleteness in some respects, and His Honor trusts that the Financial Commissioner will arrange for the addition of a table of contents and an index before it is issued. The thanks of Government are also due to Kázi Ghulám Murtaza, Extra Assistant Settlement Officer, and to Munshís Bhagwán Dás and Sheikh Súba for the assistance rendered by them to the Settlement Officer. The Lieutenant-Governor also desires to again record the obligations of the Punjab Government to Mr. J. B. Lyall (now Resident of Mysore), under whose supervision the settlement was for the most part carried out.

ORDER.—Ordered that the above Resolution be communicated to the Financial Commissioner, Punjab, for information and guidance, and to Mr. O'Brien for information. Also that the Resolution and the papers read in the preamble be submitted to the Government of India in the Department of Revenue and Agriculture for confirmation of the term of settlement for a period of twenty years.

APPENDIX.

MUZAFFARGARH CANAL RULES.

WHEREAS, in accordance with certain provisions contained in the administration papers of certain villages situated in the district of Muzaffargarh, Government has authority from time to time to frame rules for the management and maintenance of certain irrigation works in that district, the following rules have been sanctioned by the Local Government :—

Definitions.

The following canals of the Muzaffargarh District under the charge of the Executive Engineer, Muzaffargarh Division, are canals within the meaning of Act VIII. of 1873 :—

INDUS CANALS.

The Gharku.	The Purán.
„ Magas-an.	„ Surán.
„ Maggi.	„ Sulemán.
„ Adil	„ Kabír.
„ Ghutthu.	

CHENAB CANALS.

The Karam.	The Ghazanpur.
„ Ganesh.	„ Jhangawar.
„ Taliri.	„ Ali Khali.

Explanation.

1. In these rules the word "canal" means any one of the above canals inclusive of its river supply channels and all its branches for the maintenance of which *chher* labor is leviable. It also includes all subsidiary works which are necessary to the protection of the irrigated land, or to the regulation of the water-supply, such as embankments, regulators, and escape channels. Where such subsidiary works are common to more than one canal, the demand for their maintenance may be apportioned among the said canals in such manner as the Deputy Commissioner deems fit.

2. The Superintending Engineer of the circle for the time being shall be the Superintending Canal Officer; the Executive Engineer of the Muzaffargarh Division shall be the Divisional Canal Officer; and the Deputy Collector shall be the Sub-Divisional Canal Officer, as defined in Act VIII. of 1873, Section 3, item 7.

3. All establishment employed on these canals shall be under the control of the Divisional Canal Officer, subject to his departmental superiors, and to such rules as may from time to time be issued by the Local Government in the Irrigation Department.

4. In accordance with ancient custom, and by the wish of the people, it is one of the conditions of settlement that the canals shall be maintained by "*chher*" *labor*, that is by

labor supplied by the irrigators, and that in the event of non-attendance a cash commutation shall be levied. The laborers provide their own tools. They are locally known as "*chheras*," and the cash commutation as "*zar-i-nágha.*" The cash commutation for non-attendance shall, as at present, be eight annas per man per diem till further notice.

5. In the case of the Government canals divided into sections for purposes of local employment, but not for those of assessment, jurisdiction of committees, or other administrative arrangements, and which are detailed in Appendix I. of these rules, the *chheras* required from any branch of one section shall not be required to work on the branches of any other section, but they may be employed on any branch within the section from which they have been called out, and on any channels through which water is supplied to such section. Except as above provided, the *chheras* called out on any canal may be employed on any part of that canal.

6. There will be, as heretofore, one *Zar-i-nágha* Fund for all the canals of the district. Into this fund all receipts on account of the cash commutation and of sales of wood, grass and dates from date trees not assessed to land revenue from the canal banks shall be paid, and from it all expenditure will be made without regard to the income and expenditure for the time being of any particular canal.

The *Zar-i-nágha* Fund shall be devoted solely to the following purposes: first, it shall be ordinarily expended in assisting the *chher* laborers in clearing the canals, strengthening embankments, repairing breaches, cutting down spoil banks, correcting the slopes of beds or alignment of the canals, making escapes, and digging new heads; secondly, if the funds are sufficient, it may be expended in building regulators, making and maintaining plantations on the canal banks, and in the construction and maintenance of works to protect canals or canal land from river floods. It shall not be employed in making new canals or extensions of existing canals.

(NOTE.—In calculation of the amount of *chher* labor annually required for the clearances and of its distribution among irrigators, one *chher* means in Muzaffargarh the labor of one man for one day, not, as in Mooltan, the labor of one man for the whole period of *chher* labor. The primary calculation is in fact made in single day's labor, not in 90 days' labor.

A *chher-guzar* means the person (whether owner or tenant) interested in the irrigation who by custom or agreement is in each instance liable to supply the *chher* labor.)

7. The Superintending Engineer shall at the commencement of each official year, apply to the Local Government in the Irrigation Department to place at his and at the Divisional Officer's disposal such sums as he may consider will probably be required during the year from the *Zar-i-nágha* Fund.

The allotments thus applied for having been granted, the Superintending and Divisional Officers may sanction expenditure within those amounts. The limit of sanction for any particular work shall be that prescribed in the Public Works Code rules relating to expenditure from revenue ordinary for new works and repairs respectively.

8. (i) There shall be appointed to each canal a committee of sarpanches, of which the numbers shall not be less than is stated below against each canal :—

Canal.	*Minimum number of Sarpanches.*
The Gharku	3
„ Magassan	8
„ Maggi	13
„ Adil	2
„ Ghuthu	7
„ Puran	6
„ Surab	2
„ Sulemán	2
„ Kabir	...
„ Karam	2
„ Ganesh	2
„ Taliri	4
„ Ghazanpur	1
„ Jhangawar	2
„ Ali Khali	2

The minimum above stated may be revised from time to time under orders of the Chief Engineer of Irrigation.

(ii) The appointment of sarpanches shall rest with the Divisional Canal Officer and Deputy Commissioner acting jointly together. And in selecting men for these duties up to the minimum limit above fixed for each canal, the said officers shall follow (as nearly as may be) the procedure for the time in force for the appointment of revenue zaildárs.

(iii) On each canal the said officers may appoint, without taking the votes of village headmen, an additional number of sarpanches not exceeding half the minimum above stated.

(iv) No person shall be appointed a sarpanch under Clause (ii) above, unless he holds not less than 100 acres of land irrigated by the canal to which he is appointed; nor shall any person be appointed under Clause (iii) unless he holds at least half the said area. Nor shall any patwári or other person holding service under Government in the district be appointed.

(v) On the canals named in Appendix I., the Deputy Commissioner will decide how many of the sarpanches to be appointed under Clause (i) of this rule shall be elected from each of the canal sections stated in the said Appendix; and the elections on those canals shall be by canal sections. The sarpanches to be appointed under Clause (iii of this rule shall be similarly distributed over the sections of the said canals.

(vi) Differences of opinion arising between the Deputy Commissioner and Divisional Canal Officer under this rule shall be referred for the orders of the Commissioner, whose decision shall be final.

(vii) Every sarpanch's appointment under this rule shall be for five years, but his tenure of office may be extended, at the discretion of the Divisional Canal Officer, for a period not exceeding four years more. A sarpanch, whose tenure of office has expired, may be re-elected or reappointed.

9. Canal sarpanches shall discharge their duties under the direction and control of the Divisional Canal Officer; and with the concurrence of the Deputy Commissioner may be removed by him for negligence, incompetence, or misconduct. The Divisional Canal Officer shall record briefly, in English and Vernacular, his reasons for such removal, An appeal from his orders shall lie to the Commissioner. whose order shall be final.

10. The duties of the members of the committee of a canal are :—

(i) To attend in person during the clearances in such numbers and order as the Divisional Canal Officer may direct. The members thus present shall verify and sign the daily lists of those present as heretofore, which shall then be submitted to the Divisional Canal Officer.

(ii) To assist the Divisional Canal Officer with their advice on all matters regarding the management of the canals, especially as to dates and places of employment of the *chher laborers* and all questions connected with clearances, the use of *chaps*, the distribution of water and the calling of the *chikar-chheras*.

(ii) To report to the Divisional Canal Officer all instances of neglect or misconduct on the part of the moharrirs and mimhárs in the performance of their duties, and to assist in the appointment of these officers by bringing to notice the names of suitable and competent persons. The committee shall also possess a right to veto all first appointments to either of the above offices on satisfactory cause being shown.

(iv) The opinion of the committee on all points referred to it shall be reduced to writing, and when the Divisional Canal Officer over rules it, as he is hereby empowered to do, he shall record his reasons for so doing.

11. (1) Each member of a committee who performs his duties to the satisfaction of the Divisional Canal Officer will be entitled to have 180 *chheras* per annum exempted from attendance out of the number due on his own holding. The number thus exempted shall be deducted from the total number of *chheras* fixed for the canal.

(2) This exemption may be cancelled by the Divisional Canal Officer in case of neglect of duty, and the orders of the Divisional Canal Officer in this matter shall be final.

(3) No member of the committee shall be allowed a remission of a greater number of *chheras* than that at which he has actually been assessed.

12. The number of *chheras* required on each canal for the clearances of each year shall be estimated in the month of September by the Divisional Canal Officer in the following manner :—

Of the total *chher* assessment of each year, and the *chher* rate.

(i) He shall add up—

(*a*) the whole number of ordinary *chheras* who have actually worked on the canal during the three previous clearance seasons ;

(*b*) the number of *chheras* remitted to sarpanches during the same time ;

(*c*) the number of supplementary *chheras* employed on the canal under Rule (21) during the previous 36 months.

(ii) The total thus obtained he will divide by 3 ; and add to the result.

(*a*) the number of *chikar-chheras* called out during the past hot weather ;

(*b*) the number of *chheras* employed in watching the embankments connected with the canal during the previous hot weather.

(iii) The Divisional Canal Officer will then consider this corrected total (ii) in consultation with the committee of sarpanches, and he may reduce or enhance this total by a sum not exceeding one-fifth with reference to the then condition of the canal and the probable requirements of the working season. The sum so fixed will be the total *chher* assessment of the canal for the coming season.

(iv) Having thus arrived at the total *chher* assessment of the canal, the Divisional Canal Officer will add up the total acres irrigated by the canal during the three years ending with the previous rabi, and dividing this area by 3 he will assume the result to be the average area of irrigation.

(v) He will then divide the total *chher* assessment by the average area of irrigation, and declare the result to be the rate per acre irrigated chargeable for the coming season to each *chher-guzár*.

(NOTE.—In calculating the rate, fractions of units shall be stated in the nearest chitak.)

(vi) This *chher* rate shall be communicated by him through the tahsíldár to each patwári concerned not later than the 10th October. And a list showing the *chher* rate declared for each canal shall at the same time be furnished to the Deputy Commissioner.

Of the distribution of the *chher* assessment on each holding.

13. (i) It shall be the duty of the Deputy Commissioner and his revenue establishment to distribute the total *chher* assessment thus declared for each canal over its *chher-guzárs* in the following manner :—

(ii) The distribution shall be reckoned on the area irrigated by canal water in the current kharíf and coming rabi.

(iii) For each irrigating village the patwári shall prepare in duplicate a list in the form (or other similar form prescribed for that purpose) given in Appendix II. of these rules, showing for each *chher-guzár* the area in respect of which he is liable to contribute *chher* labor during the coming season, and the total *chher* labor due thereon at the rate fixed by the Canal Officer.

(iv) One copy of this list shall be sent by the patwári to the tahsíldár not later than 1st December. And the tahsíldár shall immediately on receipt thereof forward it to the Divisional Canal Officer. The tahsíldár is responsible for the correctness of the lists thus forwarded by him.

(v) The patwári, when forwarding the said list to the tahsíldár, shall attach to it, for distribution to the *chher-guzárs*, under Rule 15, parchas duly written and filled up on forms supplied to him for this purpose by the Divisional Canal Officer.

Of complaints against the entries in the patwári's list.

14. (i) Any *chher-guzár* may demand from the patwári in advance of receipt of the Canal Officer's parcha a memorandum of the entries made by him in the *chher* list described in Rule 13.

(ii) A *chher-gúzár* may complain to the tahsíldár or other revenue officer having jurisdiction that the irrigated area of his own or other holdings has been recorded incorrectly by the patwári.

(iii) The Deputy Commissioner shall issue from time to time such orders as are found necessary for the prompt disposal of such complaints by himself or the officers appointed by him in this behalf. And there shall be no appeal from the Deputy Commissioner's orders in such cases.

(iv) The complaints made under this rule may be supported by the patwári's memorandum (clause 1), or by exhibiting the Canal Officer's parcha (Rule 15), but the Canal Officer's parcha shall not in any case be taken out of the possession of the *chher-gúzár*. Nor shall a complaint be refused hearing for want of these documents in support.

Of the distribution of assessment parchas to each *chher-guzár*.

15. On receipt of the patwári's list of *chher-gúzárs*, as provided in Rule 13, the Divisional Canal Officers shall cause to be entered on the parchas accompanying the dates and places at which each *chher-gúzár* is required to supply the labor assessed on him and shall distribute the said parchas to the *chher-gúzárs* within 15 days of receipt of the list, either through the patwáris or as may be convenient.

16. The Divisional Canal Officer may, whenever practicable and with the consent of the Canal Committee, assign to the *chher-gúzárs* on any canal or portion of a canal tasks or definite quantities of work to be done in lieu of the *chher* labor for which they have been assessed during the current season. Any *chher-gúzár* failing to complete his task shall be liable to a fine not exceeding double the estimated cost of its completion, which will be paid into the *Zar-i-nágha*. The equivalent in taskwork for one *chher* laborer shall be determined by the Divisional Canal Officer in concert with the Canal Committee before the tasks are distributed.

17. (i) The dates and places for attendance of *chher* labor referred to in Rule 15 shall be fixed by the Canal Officer after consultation with the Canal Committee; provided that the clearances shall usually commence not later than 25th December.

(ii) The lambardárs of every irrigating village and the revenue zaildárs shall actively exert themselves to secure the attendance of the *chher* laborers at the places and on the dates entered in the parchas.

(iii) Every *chher-gúzár* failing to supply labor at the places and on the dates mentioned in the parcha received by him from the Canal Officer shall be charged the commutation rate fixed under Rule 4.

18. (i) All *chheras* shall work under the control of the Divisional Canal Officer.

(ii) The Deputy Commissioner, and his assistants and tahsíldárs acting under his instructions, may inspect *chher* gangs, their work, and the attendance registers, and may during such inspections inquire into irregularities and complaints. The results of such inquiries shall be submitted to the Divisional Canal Officer.

19. A clear record shall be maintained of the men daily present, and shall be signed or sealed daily by the Committeemen in attendance on the work. A daily report shall also be sent to the Divisional Canal Officer, showing the number of men present on each canal.

20. When a Divisional or Sub-Divisional Canal Officer or a Revenue Officer, authorized under Rule 18, has satisfied himself by personal inquiry on the spot that any *chher* laborer has been idle or insubordinate, he may pass a written order in the register of attendance that one or more day's attendance of such *chher* laborer shall count as non-attendance, and the commutation fee, as in last rule, shall be levied for every such day. The members of the Committee present at the clearances may pass a similar order, provided it is clearly reported in the register and signed or sealed by all the members present, being not less than two.

21. A list showing the commutation money due from each *chher-gúzár* on account of absentees shall be sent by the Divisional Canal Officer to the Deputy Commissioner at the close of each clearance season, and the amounts charged thereon shall be collected as an arrear of land-revenue, with the first instalment of the rabbi harvest, and shall be credited to the *Zar-i-nágha* Fund.

22. If the *chher* work of the year on any canal or section is completed before all the *chher* labor has been employed, the Deputy Commissioner, after consulting the Divisional Canal Officer, may remit the balance of the *chher* demand of that canal or section. Such remission will not be taken into account in reckoning the average on which future assessments will be based.

23. (i) If the *chheras* assessed under Rule 12 are unable to complete on any canal the work of the season, a supplementary levy (locally known as "four-anna *chhers*") can be made with the sanction of the Deputy Commissioner, and shall be declared in the form of a proportional addition to the demand fixed under Rule 13.

(ii) A daily wage of four annas shall be paid from the *Zar-i-nágha* Fund to every laborer who works on the canal pursuant to this demand.

(iii) Such laborers shall be subject to the same control; and the same penalty for non-attendance shall be leviable as is provided by these rules for *chheras* assessed under Rule 12.

24. (i) Every canal-irrigated village shall be liable to supply, on demand by the Divisional Canal Officer, special or "hot weather" *chheras* (locally known as *chikar-chheras*) during the irrigating season or after the clearances are completed.

(ii) *Chikar-chheras* may be called out for any of the following purposes :—

> Strengthening or cutting through bunds for maintaining the supply in the canals, opening or clearing alternative heads when necessary to maintain the supply, closing breaches in the canal banks, clearance of escape or drainage lines, repairs and maintenance of the flood embankments protecting canal-irrigated land.

(iii) *Chikar-chhers* shall be levied with such regard to the convenience of the whole body of irrigators as the urgency of each case may require. And the Canal Officer will consult the Deputy Commissioner and the Canal Committee, so far as may be possible, with reference to the same urgency.

(iv) No *chher-gúzár* may refuse to supply *chikar-chhers* on the ground that the demand made on it exceeds his proportional share. But in levying during the following cold season the demand assessed under Rule 13, the Divisional Canal Officer shall give credit to each *chher-gúzár* for any *chheras* supplied by him under this rule; the said credit being given by endorsement on the canal parchas before issue (Rule 15).

(v) No wages shall be payable to *chikar-chheras*.

(vi) *Chikar-chheras* shall be subject to the same control; and the same penalty shall be leviable for non-attendance as is provided by these rules for *chheras* assessed under Rule 12.

(vii) The appended statement (Appendix III.) shows for each canal the lengths of existing embankments and escapes or drainage lines for which *chikar-chhers* may be called out. This list will be modified from time to time with the sanction of the Deputy Commissioner and Chief Engineer of Irrigation as the circumstances of each canal may require.

25. The Divisional Canal Officer may during the hot weather require any irrigating village to supply men to watch embankments connected with its canal; and the provisions of clauses (iii) to (vii) of the preceding rule shall apply to all such demands.

26. No change in the old course of a canal, nor any permanent alteration in the irrigation affecting in any way the payment of revenue as fixed at settlement, shall be made by the Divisional Canal Officer without consulting the Deputy Commissioner.

27. (i) Any owner or occupier of a holding who claims a remission of any part of his canal land-revenue assessment must present a written petition to the Deputy Commissioner by the 15th September at latest, after which no such petitions shall be received.

(ii) The Deputy Commissioner will be responsible for the prompt investigation of all such claims, and shall direct a local inquiry to be made and a report submitted by the tahsíldár or other officer subordinate to himself whom he may select for the purpose.

(iii) Whenever possible the evidence of the canal subordinate in immediate charge of the canal concerned shall be taken by the officer making the local inquiry, and shall be filed with the record thereof.

(iv) On receipt of the report, whether the Deputy Commissioner considers that a remission of the canal assessment should be allowed or not, he shall forward the file, with a memo. of his opinion, to the Divisional Canal Officer for any remarks he may have to make.

(v) If the Divisional Canal Officer sees no reason to differ, he shall return the file with a note to that effect. If, however, from his knowledge of the working of the canal he is disposed to doubt the correctness of the facts reported, or of the Deputy Commissioner's conclusion, he may make any investigation he thinks necessary, and then return the files to the Deputy Commissioner with a statement of opinion.

(vi) On receipt of the Canal Officer's reply, or after making such further enquiry as he may think fit, the Deputy Commissioner will pass his final orders rejecting the claim or directing a proposal for remission to be entered in the annual statement to be submitted for the Financial Commissioner's sanction.

(vii) The Canal Officer shall be informed of the order thus passed, and of any others subsequently received from superior authority.

(viii) In all such cases the Deputy Commissioner may suspend the collection of any demand for canal revenue that may fall due before the procedure above laid down can be completed. Such suspension orders will be subject to the same rules in respect of sanction and control of the Commissioner as are provided for the suspension of land-revenue. And notice of all such orders shall be given to the Divisional Canal Officer.

28. Any *chher-gúzár* on whom commutation money has been assessed under these rules may apply to the Deputy Commissioner for its remission or suspension. Such petitions shall be referred to the Divisional Canal Officer for inquiry and report. And final orders thereon shall be passed by the Deputy Commissioner after receipt of that report and after such further inquiry by the Deputy Commissioner as each case may require. But so far as the Deputy Commissioner's

decision depends on the question of attendance or non-attendance of *chher* laborers, he shall be guided by the facts found by the Canal Officer.

29. Before water is given to a village previously unirrigated by any canal, the Divisional Canal Officer shall take an agreement in writing from the village to abide jointly and severally by the provisions of these rules and of any others for the time being in force ; and also to pay water advantage on newly irrigated land according to the conditions prescribed at settlement in villages adjacent. And such agreement shall further stipulate that if the village or any of its irrigators shall make default in respect of the matters entered therein, the Canal Officer shall have authority either to stop the supply of water or to levy a canal occupier's rate, within the meaning of Section 36, Act VIII. of 1873.

APPENDIX I.

CANALS DIVIDED INTO SECTIONS FOR THE PURPOSES OF RULE 5.

Explanation.—The entries in column 3 include minor branches and alterations of existing channels.

1	2	3	4
Name of Canal.	Section.	Branches included in each section.	REMARKS.
Gharku ...	1st Section ...	Kot Sultan Feeder. Hinjrai. Din Muhammad Dhori.	
	2nd Section ...	Radha. Nangn. Wali. Khan Chand. Panjhatti. Fazl. Otani. Mohan.	
Magassan ...	1st Section ...	Chaudri. Nangni. Nari. Dol. Sirmunni. Kesho. Ganda Bhubbar. Sahju. Soni. Ganda Pírhar. Hala. Pirhar. Raju. Karia Chaudri. Khakki. Nabi.	
	2nd Section ...	Murad. Sirdar. Karia Sananwan. Karia Tej Bhan. Karia Gaman Khan. Muhammadpuri. Khanpuri. Nangni Khurd. Lar Janubi. Nangni Kalan.	

APPENDIX I—*continued.*

1	2	3	4
Name of Canal.	Section.	Branches included in each section.	Remarks.
Magassan—*concluded.*	3rd Section ...	Jan Muhammad. Pir. Hamza. Dogri. Chakar Khan. Karia Khakh. Karia Tibbi Nizam. Chuan. Ghulam.	
Maggi ...	1st Section ...	Khudadad. Lishari. Bulla. Sultan Khar. Fazil Kalru.	
	2nd Section ...	Suk, Main Branch. Kot. Karia Khohawar. Karia Gordhan. Wairar. Kori. Haji Ishak. Jakhri. Thal. Bahawal. Gahne. Sam. Karia Nusrat. Sirdar.	
	3rd Section ...	Dinga, Main Branch. Sirdar Khurd. Kalu ... Sirdar Kalan. Nang. Chatli. Karkna.	Includes extension to Wali.
Ghuttu ...	1st Section ...	Pir. Raj. Rehri. Behishti. Bakht. Azim.	
	2nd Section ...	Sirdar. Khandar. Ahmad Shah. Moradpuri. Kiraru. Ghilu. Ghulam. Biloch.	

APPENDIX I—*concluded.*

1	2	3	4
Name of Canal.	Section.	Branches included in each section.	Remarks.
Puran ...	1st Section ...	Bakkhi. Beti. Karkan.	
	2nd Section ...	Kapra Khas. Khanana. Nimana. Kutab. Murad Shah. Said. bhagti. Chandr Bhan.	
	3rd Section ...	Lunda (North). Lunda (South). Sabaya. Pir. Kadra. Bahawal. Khan.	

APPENDIX II.

PATWARI'S LIST OF CHHER-GUZARS.

Referred to in Rule 13.

1	2	3	4	5	6	7	8	9	10
Serial No. in this List.	Name of Canal and Branch.	*Chher-guzár.*	IRRIGATED AREA.				Divisional Canal Officer's *chher* rate per acre.	*Chheras* due.	REMARKS.
			Harvest.	Girdáwari No. of holdings irrigated.	Area of each harvest.	Area of both harvests.			
			Rabbi ...						
			Kharif ...						
			Rabbi ...						
			Kharif ...						

APPENDIX III.

Statement showing lengths of existing flood-protective embankments, escape channels, aad canal bunds, and the villages and canals liable for the repairs and maintenance of each, referred to in Rule 23.

1	2	3
Name of work.	Length.	Canals or villages liable to supply *chhers* for maintenance and repairs.
Flood-protective Embankments.		
Sananwan	2¼ miles ...	Gharku and Magassan.
Shekhanwala	1½ „ ...	Kot and Ishak branches of the Suk main branch of Magg.
Arain	4 „ ...	San, branch of Suk main branch, Sirdar Khurd and Kala branches of Dinga main branch. } Maggi.
Kinjhar and Mahra	8½ „ ...	Pir and Raj branches of Ghuttu and Adil Canals.
Puran	1½ „ ...	Puran.
Kot Ratta from north end to 1st or Muradghat or Gap	...	Villages on west bank of Surab.
Kot Ratta from Muradghat or Gap to Suleman Canal	12,800 s. ft. ...	As this length does not at present protect canal irrigation, Deputy Commissioner has verbally consented to arrange for its maintenance temporarily by the people who benefit from the *sailab* permitted through the Gaps.
Langar Sarai	8,200 „ ...	Ganesh, above Provincial road.
Khilluwala	1½ miles ...	Taliri, above Provincial road.

Wafadarpur	3 „ miles. ...	The villages protected.
Khangarh Kothela	8 „ ...	Ditto ditto.
Makhan Bela	7 (about) miles ...	Ali-Khali Canal and a few other villages protected.
Escapes or drain, Rohillianwala. Section above Panjihar bridge	10 miles ...	The Chenab Canals.
Rohillianwala. Section below Panjihar bridge receiving drainage from Wali or Scinde Escape	10 „ ...	The Chenab Canals and branches of the Ghuttu, excluding the Sirdar and Ghilu.
Scinde (or Wali extension). Section between Kalu and Sirdar Dinga ...	7 „ ...	Dinga main branch of the Maggi and its branches:
Scinde (or Wali extension). Section between Sirdar Dinga and Panjihar bridge	9 „ ...	Adil Canal, Pir and Raja branches of Ghuttu.
Bunds to maintain supply in certain Canals.		
Bet Angra	...	Maintenance not at present necessary.
Lassuri	...	Dinga main branch of Maggi and its branches.
Chittah	...	Adil Canal.
Sirdar Ghuttu	...	Sirdar branch of the Ghuttu.

No. 231, dated Lahore, 11th November 1885.

From—H. C. FANSHAWE, Esquire, Offg. Junior Secretary to Government, Punjab,

To—The Secretary to the Government of India, Revenue and Agricultural Dept.

I AM directed to forward, for the information of the Government of India, a copy of the Report on the recent Regular Settlement of the Muzaffargarh District, together with a copy of the orders of the Lieutenant-Governor thereon, and to solicit sanction to the confirmation of the Settlement for a period of twenty years.

94 R.
No. ——, dated Calcutta, 17th February 1886.
48—1.

From—C. J. LYALL, Esquire, C.I.E., Offg. Secy. to the Govt. of India, Revenue and Agrl. Department,

To—The Secretary to Government, Punjab.

I AM directed to acknowledge the receipt of Mr. Fanshawe's letter No. 231, dated the 11th November last, giving cover to the report on the recent regular settlement of the Muzaffargarh District, and to the resolution recorded on the report by His Honor the Lieutenant-Governor.

2. The submission of this report, like that of those on the settlement of the Delhi, Jhelum and Jhang Districts, has been much delayed, and nearly five years have elapsed since it was originally submitted to the Settlement Commissioner. This period amounts to almost one-fifth of the term for which it is proposed that the assessment should continue in force. It is not, however, necessary to say anything further on the subject of the delay which has taken place, as this has been noticed in other communications, and the President in Council is glad to learn from a letter* recently received, that steps are now being taken to secure the early submission of the remaining settlement reports which are still before the Punjab Government or the Financial Commissioner.

* No. 17, dated the 29th January 1886.

3. The District of Muzaffargarh resembles that of Jhang in the fact that it is less liable to suffer from loss of crops than are more favored tracts in which the normal rainfall is sufficient to lead agriculturalists to dispense with irrigation. Over a large portion of the District, however, contributing no less than one-fourth of the total land-revenue, river floods cause the outturn to be irregular, and His Honor in Council observes with satisfaction the practical recognition of this fact which is afforded by the successful introduction of a scheme of fluctuating assessment.

In the remainder of the district the stability of the revenue administration depends, as pointed out by the Government of the Punjab, entirely on the proper working of its canals. The reforms which have been effected in this direction are very gratifying, and the success of the *chher* labor system goes far to prove the wisdom of the action taken in connection with the same class of labor in the adjoining district of Mooltan.

4. The results of the present assessment afford a subject for congratulation. No immediate increase of revenue has, it is true, taken place, but there is reason to believe that a firm foundation has been laid for the future prosperity of the District, and the expediency of adapting the system of revenue administration to local conditions has, it may fairly be hoped, been exemplified. For these results the Government of India is, no less than the Lieutenant-Governor, indebted to the Settlement Officer. Mr. O'Brien's earnest devotion to the interests of the district, his evident sympathy with the cultivating population, and the close study which he has given to their agriculture and to the conditions on which it depends, are the manifest cause of the success which has won Sir Charles Aitchison's approbation.

5. The President in Council confirms the settlement of the district for a period of twenty years.

Endorsement by the Punjab Government.

No. 62, dated Lahore, 9th March 1886.

COPY forwarded to the Senior Secretary to Financial Commissioner, Punjab, for information and guidance, with reference to his letter No. 687, dated the 1st of June 1883.

No. 63.

COPY forwarded to Mr. O'Brien for information.

Punjab Government Press, Lahore—16-4-86—350.

No. 1.

FROM

EDWARD O'BRIEN, ESQUIRE,

Settlement Officer,

To

MAJOR E. G. WACE,

Settlement Commissioner, Punjab.

Dated Muzaffargarh, the 7th April 1881.

SIR,

I have the honor to submit the final report of the first Regular Settlement of the Muzaffargarh District, with the following papers :—

1. Village Statements.
2. Annual Demand Statement.
3. The statement showing the tenures on which land is held.
4. General Abstract of area, resources, &c.
5. General Statement by village.
6. Abstract of area under crops.

Four maps accompany the report. The first shows the general features of the district, and the roads, canals, dhands and embankments, and all villages containing over 500 inhabitants. The second gives the divisions of the district under former Governments which were called tálukas. The third shows the assessment circles into which the district was divided at Settlement. The fourth gives the Government rakhs as finally demarcated.

Mír Nisár Alí was appointed Extra Assistant Settlement Officer in 1873. On 24th September 1875 he was promoted to be Judicial Assistant at Dera Gházi Khan, and Kazi Ghulám Murtazá was appointed to succeed him. Ghulám Murtazá is a resident of Ahmadpur in the Jhang District.

He married into a Muzaffargarh family. He has spent most of his service in the Muzaffargarh District. He has been Tahsíldár and Náib-Tahsíldár in Mooltan, and Extra Assistant Commissioner in the Montgomery District. He consequently has a very perfect knowledge of this part of the country, which rendered him very useful. His honesty was beyond question. He did his work thoroughly well, and the people had full confidence in him. I could not have wished for a better Assistant.

Munshí Bhagwán Dás was the best of the Superintendents. He had great power of organization and the gift of managing his subordinates so as to get the greatest amount possible of cheerful work out of them. He was hard-working, honest and intelligent. He was popular.

Sheikh Súbah came highly recommended from the Dera Gházi Khan Settlement. He had not Bhagwán Dás's power of management, and overworked himself rather than entrust details to his subordinates. The only fault I had to find with him was that he worked too hard. He was honest and active.

Pandit Narain Dás became Superintendent when Ghulám Murtazá was made Extra Assistant Settlement Officer. He worked well and honestly. He is a man of marked ability but inclined to be unpunctual. I believe he was thoroughly honest.

In Jugal Kishore the Settlement had a first-rate head clerk. He was promoted to the Commissioner's Office, Delhi, in 1878.

I have the honor to be,

Sir,

Your most obedient servant,

E. O'BRIEN,

Settlement Officer.

Muzaffargarh Settlement Report List of Errata.

Page 1. In line 32 for "850 miles" read "850 square miles."
Page 3. In line 31 for "capre" read "kapre."
Page 11. In line 16 for "supply" read "supplies." In line 19 for "dependant" read "dependent."
Page 15. In line 32 for "chiat" read "chita."
Page 29. In line 8 for "callingonum" read "calligonum." In line 14 for "biminea" read "viminea."
Page 33. In line 32 for "tribules" read "tribulus." In line 39 for "horida" read "horrida."
Page 38. In line 39 for "florikin" read "florican."
Page 41. In line 4 for "mahtan" read "mahtam."
Page 42. In line 24 for "carinato" read "carinata."
Page 43. In line 21 for "Langar Sarai Bukhi" read "Langar Sarai to Bukhi."
Page 45. In line 3 for "kunjar" read "kinjar."
Page 57. In line 13 for "Nawab Hasan Khan" read "Nawab Ghulam Hasan Khan."
Page 80. In line 41 for "indargan" read "indarjan."
Page 85. In line 6 for "bighas of til" read "bighas of til in Kharif."
Page 91. In line 15 for "shall" read "should."
Page 103. In line 21 for "previous" read "pervious."
Page 108. In 2nd line from the bottom for "trae" read "rate."
Page 110. In last column of statement in para. 24 omit "acres."

LAND REVENUE SETTLEMENT

OF THE

MUZAFFARGARH DISTRICT.

CHAPTER I.—PHYSICAL GEOGRAPHY.

Shape, situation, dimensions and boundaries.

1. The district of Muzaffargarh lies between the parallels of latitude 30° 46′ 30″ and 29° 1′, and longitude 71° 49′ 15″ and 70° 33′ 20″. Its total area is 2,009,156 acres, and it contains a population of 295,547 souls, or 98·79 to the square mile. Of the total area, 462,109 acres, or 23 per cent., are cultivated and fallow; 953,870 acres are culturable waste; 281,725 are unculturable, and 311,554 are Government waste. This district forms the lower extremity of the Sind Ságar Doáb, and is in shape a long narrow triangle, the eastern and western sides of which are formed by the rivers Chenab and Indus respectively, the apex being placed at the junction of those rivers. The base of the triangle forms the northern boundary of the district dividing it from Dera Ismail Khan and Jhang, and is about 55 miles long. The length of the triangle is 132 miles. The Indus is the western boundary of the district, dividing it from the Dera Gházi Khan District. The Chenab is the eastern boundary dividing it from the Mooltan District and the Baháwalpur State. The northern part of the district consists of the valley of the Indus on the west, the valley of the Chenab on the east, and the sandy desert known as the Thal, in the centre. The valley of the Indus is broader than the valley of the Chenab. The main stream of the Indus has for years been receding to the west, and there is now a strip of good land 10 miles wide lying between the Indus and the Thal. This strip is irrigated near the bank of the river by the annual inundation, and inland by inundation-canals. The valley of the Chenab is deeper but not so broad, and does not seem subject to such great alterations as that of the Indus.

The Thal.

2. The two river valleys are separated by the sandy desert which occupies so large an area of the Sind Ságar Doáb and is locally known as the Thal. The Thal, like the district, is triangular in shape with its apex to the south. The sides of the triangle are about 50 miles long, its base 34 and its area 850 miles. The western part of the Thal consists of a sandy soil with occasional sandhills. As we go east, the sandhills are more numerous, and higher. They run north and south in detached ridges, and are separated from one another by long strips and basins of stiff clay. These ridges rise higher and higher until they abruptly end at the edge of the Chenab valley. The Thal is at all times the grazing-ground of large numbers of camels, and, except during drought, of herds of sheep and goats. When rain falls, good grass springs up at once and large

herds of horned cattle come into the Thal for pasture. Water is everywhere, even in the wells locally called sweet, salt and bitter. Thal residents prefer their own bitter water, and complain of the sweet water of the other parts that it has no taste. The strips and basins of good clay that lie between the sandhills are cultivated with great care. On account of the surrounding sandhills the owner cannot extend his cultivation, and he makes the most of his little oäsis. The soil is very highly manured and mixed with sand, locally called panâ, from the neighbouring sandhills. To secure abundant manure besides the supply afforded by the owner's cattle, he hires flocks of goats and sheep to make his fields their night-quarters on payment of a small amount of grain. This payment is called "áhalí," and the rate is a quarter of a sér of wheat per score of sheep and goats for each night. The water courses are made perfectly straight and are V shaped instead of square, and carefully plastered with clay and straw to prevent leakage. The fields are laid out in small beds, a perfect rectangle in shape. Nothing can be neater or can show more careful farming than the lands of a Thal well. The irrigation is from wells helped by rain. Manure and rain are indispensable to ripen a crop. The owner of each well keeps a herd of sheep and goats. If rain does not fall there is no grass for the well-cattle or for the sheep and goats. The wells have to be stopped and the cattle are taken to the banks of the rivers, and there is consequently no manure. Thus, if there is no rain there is no manure, and consequently no crop. If the rainfall is abundant the wheat crop in the Thal is heavier than in any part of the district. Though the Thal is so inhospitable, and agricultural life in it so hard, yet the people thrive on it. Nowhere else are such fine strapping men and women, and such plump, healthy children, to be seen. The Thal is not a desert throughout its whole extent. In the west and south the tracts of good land are larger and the sandhills smaller. The inundation-canals find their way in, and with their help good crops of indigo and sugarcane are grown. The Thal does not form a dorsal ridge between the rivers. There is a regular slope from the Indus to the Chenab. The native legend about the formation of the Thal is, that formerly the Indus flowed down the centre of it and deposited the sand; then the Indus changed its course to the west and the wind blew the sand into the heaps we now see. There is no doubt that the Indus did flow down the Thal at one time. I have seen a deed of sale in which Basira, a village now in the centre of the Thal and equidistant from the Indus and the Chenab, is described as Bet Basira. At Shahgarh, which is the southern end of the Thal, a long lake which used to be the bed of the Indus is still extant.

The country outside the Thal.

3. The rest of the district is a dead flat and consists of strips of alluvial land running parallel to the bank of each river which are irrigated by the annual inundation, and of a tract lying within the alluvial strips protected from the floods and irrigated by wells and canals. The alluvial lands are intersected by many side-channels of the rivers, here called dhands or pháts. The strips of alluvial land

grow wider as we proceed south, until the Indus strips meet the Chenab strips three or four miles south of the town of Alípur, and, from that point to the junction of the Indus and Chenab, the whole width of the district is subject to inundations and is dependent on them for its irrigation. In the cold season the district is of the size and shape shown in the map. In the hot weather the rivers rise and cover a long strip of land parallel with their banks. The strip so inundated by the Indus is much wider than that flooded by the Chenab. As the rivers become more swollen, they draw nearer to each other, until the Indus begins to force its way across the district at Jatoi, and flowing in a south-easterly direction, meets the rising waters of the Chenab near the village of Pakka Naich, three miles south of Alípur. This occurs about the end of June, and from this time till September the district, south of a line drawn from Jatoi to Pakka Naich, is more or less submerged. At first the water keeps to the depressions in the ground; but as the season advances the flood spreads over the whole country. Communication is effected by boats, and the town of Khairpur, a place of considerable mercantile activity, situated at an equal distance from the cold-weather streams of both rivers in the centre of the Doáb, becomes a port from which cargoes are shipped to Sindh. Attached to every house in this flooded part of the district are one or more small platforms raised on poles called manhán (Hindustani machán), on which people live when washed out of their houses. And a very hard life it is. From the end of June to the beginning of September the people are exposed to the hot sun by day, and to swarms of mosquitos at night. Sometimes they are unable to leave the manháns for days and weeks together. When the water subsides, comes the season called Sahrá, during which hardly any one escapes attacks of malarious fever. A proverb says that to go and live by the river side is to place a baby in a witch's lap, and another—

"Vasandar bet
Na tan capre
Na rotí pet." = Residence in the bet is to have no clothes for the body and no bread for the belly.

There are, however, two sides to the question, for—

"Daryá dí hamsáyá,
Na bhukhá na tiháyá." =
The neighbour of the river
Is neither hungry nor thirsty.

Canal tract.

4. Bounded by the Thal on the north, and on its other three sides by the alluvial lands above described, is a tract naturally and artificially protected from inundation and occupying the centre of the district. This contains many populous villages and a few fair-sized towns. Superior crops of sugarcane, indigo, rice and wheat are grown in it. It is irrigated by inundation-canals which run from April to September, and which are assisted by a large number of wells. Though this canal tract is in normal years protected by artificial embankments and natural elevations from the floods, yet the land lies very low, and destructive

inundations from both rivers, especially the Indus, do occur. During the seven years of this Settlement, this tract has been severely injured twice, once in 1874 by a flood from the Indus, and again in 1878 by floods from both the Indus and Chenab. This canal country is throughout its length seamed with long depressions in the level of the ground running from north-west to south-east, which at various times were beds of the river Indus. Indeed, there appears little doubt that at one time or another, the whole of what is now the Muzaffargarh District was river-bed; of these old river-channels the most clearly marked are the Shahgarh, and the Sindri, Saithal, Nangni, Garang, and Jannuwah dhands, and the old watercourse which is now used as the bed of the Puranwah canal. Well-defined old watercourses of this kind are called Garak Garang and Garangi. The dhands will be described further on. The district thus consists of three great natural divisions—the Thal, the alluvial country, and the canal tract. For assessment purposes a more minute division has been made, but the real natural divisions are those above given.

Administrative divisions.

5. The district is divided into the following three tahsíls :—

Muzaffargarh.
Alípur.
Sananwan.

Muzaffargarh Tahsíl contains five police jurisdictions—

Rangpur.
Muzaffargarh.
Khangarh.
Kinjar.
Rohilánwáli.

Alípur contains four police jurisdictions—

Shahr Sultán.
Jatoi.
Alípur.
Sitpur.

Sananwan contains three police jurisdictions—

Daira Din Panah.
Kot Adu.
Sananwan.

The Rivers.

The Indus.—

6. The Indus forms the western boundary of the district throughout its whole length, a distance of 110 miles. The slope of the bank in this district is shelving and easy, the set of the stream being towards the western bank, which, in the Sangarh Tahsíl of Dera Gházi Khan, is high and steep. In the cold weather it is two miles wide. In

the hot weather it overflows its banks to such an extent that its width cannot be estimated. Its depth varies from 12 feet in the winter to about 24 feet in the summer. The current is strong and rapid. It has a great tendency to form islands and shoals which makes its navigation dangerous to boats. The most remarkable feature of the Indus is the gradual shifting of its stream to the west. The native legend of its having once flowed down the centre of the Thal has been mentioned. In the middle of the district are many villages now far away from the Indus to whose names are added the words Bet, Bela, Kacha, denoting that at one time they stood on or near the river-bank. The inland portion of the district is full of watercourses which were once beds of the Indus. In receding westward it has left various side-channels which are easy and safe means of irrigation. The numerous inundation-canals of the district have their heads in the side-channels, and are therefore comparatively safe from the erosion which is so destructive where canals take off direct from the main stream. We know from the *Aín Akbari* that the Indus joined the Chenab opposite Uchh, about 60 miles above the present confluence at Mithankot, and that nearly the whole of what is now the tahsíl of Alípur was then on the west bank of the Indus. General Cunningham's Ancient Geography, page 220, says that the junction "was still unchanged when Rennell wrote his geography of India in A.D. 1788, and still later in 1796 when visited by Wilford's surveyor, Mirzá Moghul Bég." But early in the present century the Indus gradually changed its course, and, leaving the old channel at 20 miles above Uchh, continued its course to the south-south-west, until it rejoined the old channel at Mithankot. Native tradition, however, says that the change of a course took place suddenly, and about the year 1787 A.D., at the point where the Indus used to turn east to meet the Chenab. One of the rulers of Sitpur dug a canal along the line of the present course of the river. The Indus suddenly deserted its old bed, and began to flow along the line of the new canal, and has flowed there ever since. This tradition is corroborated by the history of the time as to the date. The change of the course of the Indus left the country formerly on its west bank, exposed to the attacks of the Baháwalpur State, then rising into power. Accordingly we find that in 1791 A.D. the Nawáb of Baháwalpur seized the whole country which was transferred by the change of course from the west to the east bank of the Indus, and from 1791 to 1819 the Nawábs of Baháwalpur governed this tract as independent sovereigns. The old of the bed Indus is still clearly marked and is known as the Jannun nála. It has a course of about 24 miles from the village of Mela Cháchá which is in the north-west of the Alípur Tahsíl, to the village of Makhan Bela opposite Uchh, where it joins the Chenab. There is also good evidence of the junction having once been at Shahr Sultán, 13 miles north of the junction mentioned in the *Aín Akbari*. The fickleness of the Indus has obtained for it the epithet of kanjri, or prostitute. The name of the Indus is "Sindh," which has three distinct meanings; (1) the river Indus, (2) the country on both banks of the river Indus and subject to its influence, and (3) the Province of Sindh.

The Chenab.

7. The Chenab is the eastern boundary of the district along its whole length, a distance of 109 miles. The river is known here as the Chenab, but before it reaches this district it has received the waters of the Jhelum and Ravi, and is more correctly called the Trináb. After it has flowed three-fifths of the distance down the district, it receives the united Sutlej and Beas and becomes the Panjnand, though it is still known to us as the Chenab. After its junction with the Indus at Mithankot, the combined rivers become the Satnand, or seven rivers composed of the five rivers of the Punjab, plus the Indus and Cabul rivers. The bank of the Chenab is in parts high and steep, in others the slope is shelving and easy. The depth of the stream varies from 15 feet in winter to 30 in summer. The Chenab is narrower and less rapid than the Indus. The deep stream shifts very much, and the navigation is difficult but not so dangerous as the Indus. The Chenab does not betray a tendency to encroach on one bank more than the other. The inclination to "west," which all the Punjab rivers are supposed to have, is not apparent on the Chenab. During the last twenty years the gains and losses of Muzaffargarh and Mooltan have been equal. 17 villages with Rs. 2,667 revenue have been transferred by the river from Muzaffargarh to Mooltan, and 17 villages with a revenue of Rs. 2,491 have been transferred from Mooltan to Muzaffargarh. Eleven inundation-canals have their heads in the Chenab.

Difference in the slope of the Indus and Chenab.

8. Looking up the Satnand with one's back to the sea, the Indus and Chenab part company at the southern end of this district opposite Mithankot. At this point the flood level is 308 feet above the sea. From here the slope of the Indus rises at the rate of 1·33 feet per mile, and the Chenab at 0·99 per mile. The Indus therefore gains 0·34 foot per mile on the Chenab, and at the north-west corner of the district, which is 110 miles above Mithankot, the Indus is 37 feet higher than the Chenab opposite at the north-east corner of the district.

There is no ridge between the two rivers, the spill-waters from the Indus are prevented from sweeping across the district partly by artificial embankments and partly by the sandhills of the Thal. The exposed state of the district is thus apparent.

Features common to both rivers.

Boats.

9. The same description of boats ply on both rivers. They are of the kind called "beri," described at page 253 of Powell's Punjab Manufactures. They carry loads of 400 maunds in the cold weather, and as much as 600 to 700 maunds when the rivers are in flood. The boats afford a safe retreat to criminals or persons who are in difficulties at home. Such people go for a trip down to Sindh, or up to Kálabagh and Pind Dádan Khan, and safely elude the police or their relations until the storm has passed.

Alluvial deposit. Kálá páni.

10. Both the Indus and Chenab carry silt in suspension in their waters, and, during the floods, deposit it on the adjacent lands which it greatly fertilises. This alluvial deposit is known by several names,—

at, mat, ubá, niván and *latár*. The effect of a plentiful deposit is said to last five years, and as the supply is regular, farmers dispense with manure in the alluvial lands. The silt of the Chenab is said to be more fertilising and to contain less sand than that of the Indus. A local proverb thus compares the rivers—

"Daryá Sindh soná leve te kalai deve,
Daryá Chenáb kalai leve te sona deve."=
The river Indus takes away gold and leaves tin,
The river Chenab takes away tin and leaves gold.

Omitting destructive floods, there is only one condition under which inundation water does harm. When the flood has deposited its silt and flows on over salt land, the water becomes full of salt, and is highly injurious to vegetation. Flood-water in this state is called kálá páni. Under all other circumstances it is most beneficial. Besides depositing rich silt it carries away the surface salts, sweetens wells, and brings with it the seeds of trees and of valuable grasses. The annual inundations caused by the rising of the river are called chhal and bor. These words are used for the normal as well as the destructive floods—

"Je bor áwe tán bakht vadháwe,
Je na áwe tán kurá kháwe."=
If flood comes it increases our luck,
If it comes not, drought consumes us. (*Proverb.*)

Destructive floods will be described in connection with protective embankments. The rivers abound in fish, but few are caught in the main stream, except the khagá, a siluroid fish which takes a bait readily. The fishermen's apparatus is too weak and too small to be of much use in the large and rapid channels of the rivers. The great field for fishermen is in the side-channels, backwaters and tanks, here called dhands. The fish-eating crocodiles (*Gavialis Gangeticus*), here called sinsár, are common in both rivers. The snub-nosed crocodile; *Crocodilus palustris*) is common, but it shows itself less and prefers the still water of the dhands. Tortoises are found both in the rivers and in the dhands. The porpoise (*Platanista Gangetica*), here called bulhin, is often seen in the main stream of the rivers; otters are common and are said to be taught by fishermen to bring them fish. I have seen tame otters fishing, but they ate the fish directly it was caught. Otters are supposed to be the incarnation of greediness, and a proverb says—"Only a fool would go to the otter's home to get the remains of yesterday's dinner."

Rivers, the remarkable feature of the district.

11. The rivers and the facts incidental to them are the remarkable feature of this district, and touch the administration at more points than any other natural phenomenon. They irrigate by their regular inundation 120,000 acres, and by canals depending on them 200,000 acres of cultivation. These 320,000 acres have to be measured up and 120,000 acres assessed with land-revenue every year, so that it is a matter of deep interest, both to a population almost wholly agricultural and to government which derives its revenue here literally

from the water, that the rivers should rise at the usual time, that the supply of water should be abundant but not excessive, and that the rivers should fall at the right time. When the supply is scanty, the keenest competition for the water begins. On the canals the best friends fall out. In the sailába country the water flowing in the drainage-channels is dammed up and forced into the cultivated lands, and some very pretty fights are the result. If the water does not retire at the proper time, the land cannot be ploughed for the rabi crop. Even when the rivers are on their best behaviour, they deprive a fourth of the population during four months of the means of following their only pursuit, agriculture, and drive them from mere *ennui* to transfer cattle from bank to bank, and provide so easy a medium for transporting the stolen animals that a naked urchin can drive a herd of fifty buffalos across the combined five rivers. Eight zaildárs in the flooded part of the country are on heavy security for indulging in this pastime, and it is no use to dismiss them, because the whole population is similarly inclined. But the rivers do not always behave well: they burst bands, carry away houses and stacks of corn, breach roads, blow up bridges, fill canals with mud, throw down Government buildings, and even drown the semi-aquatic cattle. In the flood of 1874, 500 head of cattle were drowned in the Sananwan Tahsíl alone. Thrice in the last seven years all work has been suspended for days in the Government offices. The police, the kutcherry munshís, the prisoners in the jail, and the settlement asámís have been sent in a body to make embankments, to divert floods from the town and station of Muzaffargarh. In the flood of 1874 the house of the salt patrol at Kuraishi was washed away, and he spent a happy day in August on the top of a sandhill waiting for the water to subside. Thus it will be seen that the rivers alone find the Government officials of the Muzaffargarh District in ample work.

Dhands, or back waters.

12. The side-channels of the rivers, the inlets from the rivers, and the tanks or lakes are called dhands. The side-channels are also termed pháts. The dhands are of two kinds. The first are isolated dhands in which communication with the rivers only occurs during the inundation season, and dries up before the next year's floods come. The second are connected dhands, being expansions of a river, small stream or canal, into a tank, and which throughout or for the most part of the year are connected with the rivers. The dhands supply a good deal of irrigation by means of Persian-wheels, either single (jhalár) or double (beghar), one wheel being placed above the other. The dhands abound in fish, and great quantities are caught in them. The isolated dhands are the best for fishing, because weeds spring up rapidly in them and afford a refuge as well as food for the fish. Besides fish, an account of which will be given hereafter, the products of the dhands are as follows:—

Water-lilies (*Nelumbium speciosum*). The local name is pabban. The flowers are used for medicine and considered cooling. The seed

capsules hold 20 or 22 seeds embedded in cellular pith, of the size and taste of a filbert. While young, the seeds are eaten raw or cooked as a vegetable. The flesh of the seed is called gar, it is white, covered with a green seedcoat. The seeds are considered a cure for vomiting, and, mixed with sugar, are good for diseases of children. The roots of the pabban spread in the mud at the bottom of the dhand. They are long and white and divided into lengths by knots. They are dug up and eaten, either roasted with salt or boiled as a vegetable. Pabban roots are called bhe, a corruption of the Persian bekh or root. Singháras (*Trapa bicornis*) are sometimes found in the dhands. The nuts are dried and, when required for use, the kernels are separated from the husks by pounding and made into flour. Kúndr bulrush (*Typha angustifolia*) is found in most of the dhands, especially in the south of the district. The flags are called pharí and are used for making matting called parchá and phure and string for beds. A charpoy of bulrush string is highly esteemed for its softness and coolness, and to sleep naked on such a bed is considered a great luxury. The down of the ripe ear is collected and boiled in a cloth like a plumpudding. It has a sweetish insipid taste. The down is called búr, and down pudding is búri. At the lower part of the ear a fibrous substance something like cotton is produced which is called kahú. This is used as tinder, and is much sought after by the frontier Biloches. The dhands swarm with wildfowl in the winter; a good many snipe are also seen, and occasionally a bittern. Very large bags of wildfowl have been made by sportsmen in the dhands. The dhands are very numerous and vary much in size and depth, according as the floods fill them or not. The following are the most permanent and the best for shooting:—

1. Kaudíwál *alias* Buparáí dhand in the village of Kaudíwál, three miles north of Rangpur. Wild duck, goose and snipe abundant. Good fishing.

2. Ghazanfargarh dhand in the village of Ghazanfargarh, 15 miles south of Muzaffargarh. This is a permanent lake of about 30 acres. Wildfowl abound. There is a great fishery here. It is well worth a visit to see the take of fish divided in the evening. The lake is full of water-lilies.

3. The Sindhrí dhand in the villages of Jálwálá, Muhammadpúr, Chitwáhan, Isan-wálá and Sandílá. It crosses the Alípur road between the 17th and 18th milestone from Muzaffargarh. It is full of wildfowl, and bitterns are often seen. It abounds in pabbans.

4. Saithal dhand in the village of Bastí Jalál. It crosses the Alípur road between the 20th and 21st milestone from Muzaffargarh; wildfowl are very plentiful.

5. Panjíhar dhand near Rohillanwali, 23 miles south of Muzaffargarh, the country becomes so low, that the water of the Indus and the Chenab finds its way into the centre of

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e seed is called gar, it is white, covered with
ls are considered a cure for vomiting, and,
or diseases of children. The roots of the
the bottom of the dhand. They are long
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the Doab, and a perfect network of dhands occur, all of which discharge their waters into the Panjíhar dhand, which crosses the Alipur road between the 24th and 25th milestone from Muzaffargarh. The Panjíhar is so called because it receives the surplus water of the following 5 canals :—

The Sardárwah ; the Nángwah ; the Adílwah from the Indus ; and the Hájiwah and Ghazanfarwah from the Chenab. The country here is in great want of drainage, and an attempt is being made by the Canal Department to utilise the Sindhrí, Saithal and Panjíhar dhands to drain the flood-water into the Chenab. This, if successful, will be a great boon to the country. The Panjíhar, on its way to the Chenab throws out a branch called the Nángná or snake dhand from its tortuous course. Both the Nángná and Panjihar abound in wildfowl and fish.

6. The Shahgarh dhand or garak. This is an old bed of the Indus. It begins in the village of Ayab Aráín near Kuraishí, and runs in a winding course among the sand-hills of the Thal, till it ends near the old fort of Sháhgarh, 10 miles from Muzaffargarh on the Kínjar road. This dhand is 6 miles long. The greatest width is 54 yards and greatest depth 8 feet. It abounds in fish and wildfowl. The common snipe is tolerably plentiful, and it is one of the few places in the district where the painted snipe is found. It is full of pabbans and kundr.

7. Jannúwáh dhand is about 24 miles long. The northern end is in the village of Mela Cháchá. It runs in a south-easterly direction and joins the Chenab near Makhanbela. It abounds in fish, wildfowl and snipe. Bitterns are often seen. Kundr and pabban are plentiful.

8. The Garang dhand is in the south of the Alípur Tahsíl, its northern end is in the village of Bhamrí and its southern end in Dháká. Its cold weather length is about 9 miles. Its greatest width is 60 yards, and greatest depth 12 feet. This is a real paradise for sportsmen. The water swarms with wildfowl and the banks with black partridge. Fish are abundant. Snubnosed crocodiles are constantly seen, and tortoises reaching two feet in diameter. Snipe are fairly plenty, and bitterns are occasionally seen. There is a branch of the Garang called the Alí Shah dhand, which runs through the village of Muhib Shah ; that also abounds in wildfowl.

The Bílewálá dhand in the village of Bílewálá becomes a large lake when the rivers rise well. It is remarkable for the great variety of fish found in it. Wildfowl and pabbans are abundant. The dhands mentioned are fairly permanent and are situated inland. There are

many other permanent dhands inland. The right to fish and gather pabbans is leased every year. Some dhands are leased singly, others in clusters. Along the banks of the rivers the dhands are innumerable and vary much in size and position. New ones are constantly forming and old ones are filled up. The river side dhands are leased in lengths of the river bank. The dhands on the bank of the Chenab in the Muzaffargarh Tahsíl are leased in three lengths—

1. Maksúdpúr adjoining Jhang to Murádábád, which is opposite Mooltan.
2. From Murádábád to Sulemánpur, which is opposite Shujábád.
3. From Káoni to Jhandewálí on the boundary of the Alipur Tahsíl.

The dhands on the bank of the Indus in the Muzaffargarh Tahsíl throughout its whole length are leased together. The river side dhands in Sanáwan and Alipur are not leased.

Artificial Irrigation—Wells—Canals.

13. As already stated, the annual inundation supply natural irrigation to about 150,000 acres. The rainfall is so small that no crop can be grown dependant on rain alone. The means of artificial irrigation are wells and canals. Wells are of two kinds. Those lined with masonry (pakká khú) and those lined with either logs or wattles, which are called kharorás, a well lined with logs is called "ghat dá kharorá," a well lined with wattles is called "lei dá kharorá," because the wattles are made from the lei bush (*"Tamarix dioica"*). No wells are unlined with either masonry, timber or wattles. The soil is so fine that unlined wells cannot be made. The wells are all worked by Persian wheel. Persian wheels (jhalár) are also erected on the banks of canals, rivers and tanks. There were 11,802 wells in the district in 1874-75 of the following depths to the surface of water —

11,420 wells under 20 feet.
355 wells from 20 feet to 30 feet.
27 wells from 30 feet to 40 feet.

No wells are deeper than 40 feet. The depth is very uniform, varying only from 9 to 12 feet in the greater part of the district. The depth is least in the south of the district and on the banks of the rivers. In the Thal the depth is greatest, and averages 24 feet. A well lined with masonry costs from Rs. 225 to Rs. 381, a well lined with timber Rs. 125, a well lined with wattles Rs. 35 to Rs. 90, and a jhalár lined with masonry Rs. 50. As a rule, four pairs of bullocks costing Rs. 80 a pair are used per well. The gear of a Persian wheel costs Rs. 40. In this district a well unassisted by other sources of irrigation irrigates 17 acres, a well assisted by sailáb, 21 acres, and a well assisted by canal, 23 acres. If the cultivator be intelligent and hard working, or if the shareholders are united, a much larger area can be irrigated.

"Akl bájhon khú khálí" = Without wisdom the well is empty. (*Proverb.*)

There are only 24,632 acres of unassisted well irrigation in the district. This area is equal to 6 per cent. of the total cultivation. It is a common amusement to race bullocks at wells. A pair of bullocks are yoked to the wheel and driven round as fast as possible for about half an hour, then anothert pair, and so on till the competitors have all had a turn. The bystanders then decide which pair is the winner. The owner of the winning pair receives no reward, but is expected to give food or sweetmeats to the company. The competetion interests the Jats intensely. The ordinary spectator can conceive nothing duller. The only remarkable thing is the excitement of the Jats and how they manage to raise it. The favourite day for bullock racing is the first of Visákh (April-May); hence a bullock race is called Visákhi at whatever time of the year it may occur.

Canals.

14. About 200,000 acres of cultivation are irrigated by inundation canals. These in good years flow from the 15th of April to 15th September, occasionally a fortunate set of the river or greater activity than usual in clearing enables a canal to flow all the year round.

Number and mileage.

The canals are 53 in number, of which 11 have their heads in the Chenab and 42 are fed by the Indus. Their total length is 699 miles. This mileage does not include the side channels of the Indus in which the canals have their heads, and which themselves supply a good deal of lift irrigation.

Area irrigated.

The area irrigated has been measured four times hitherto with the following result:—

		Acres.
At Regular Settlement in	1873-75 ...	203,666
By canal measurements in	1877 ...	205,000
„ „	in 1878 ...	210,206
„ „	in 1879 ...	186,051

The areas irrigated by the Chenab and Indus Canals, respectively, at the Regular Settlement survey were as follows:—

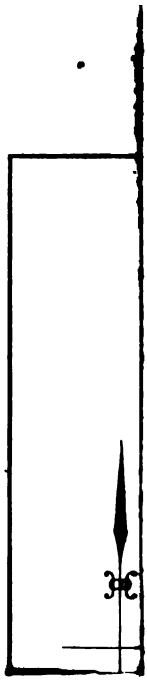
Chenab canals	... 37,115
Indus canals	... 166,551

The land-revenue depending on the canals according to the Regular Settlement is—

	Rs.
Chenab canals	... 69,435
Indus canals	... 229,640
Total of district	... 2,99,075

History and description of the canal.

15. Before describing each canal, attention is invited to the accompanying map. Before what is now the Muzaffargarh District was united under Sáwan Mal, the Sikh Governor of Mooltan, it was divided



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between four governors in whose time most of the canals were made. The present Sanawan Tahsíl was governed by Nawáb Muhammad Khán, Sadozaí of Mankerá, here known as Nawáb of the Thal. The country lying opposite Derá Gházi Khán and containing the Talúkas of Aráin, Kinjar, Serí, Trund and Mahrá was subordinate to the Nawábs Gházi Khán, Nawáb Mahmúd Gújar and the Kalhorá governors of Dera Gházi Khán and after the Sikh conquest, passed into the possession of the Nawábs of Baháwai Khán. The country lying opposite Mooltán and containing the Talúkas of Rangpúr, Murádábád, Muzaffargarh, Khángarh and Ghazanfargarh was under Nawáb Muzaffar Khán, the Pathán Governor of Mooltán. The Alípúr Tahsíl and the Talúká Khorán of Muzaffargarh Tahsíl were ruled by the Nawábs of Baháwalpur. Though these rulers were not quite synchronous, they may be treated as such in order to classify the bewildering list of names connected with the founding of the canals. The Muzaffargarh District was united under Sáwan Mal in 1833 A.D., but he had held the country round Muzaffargarh in farm from Ranjit Singh, since 1822 A.D. A minute history has been prepared of each canal in the vernacular canal record which has been made at the Regular Settlement and which will be found useful in deciding canal disputes: a short account of the most important canals may be given here.

Chenab canals.

16. The 11 Chenab canals differ from the Indus canals in having their heads independent of one another. On the Indus, a number of canals have their heads in a phát or side-channel and can be described together.

1. The Karamwah canal has its head in the village of Maksúdpúr at the north-east corner of the district. Its length is 22 miles. It irrigates 997 acres, paying a revenue of Rs. 1,472. It was a natural branch of the Chenab which was improved by Karam Narain, son of Sáwan Mal, when the former was Governor of Rangpúr. He spent Rs. 5,000 on the work and repaid himself by levying a rupee on each well, till the whole sum was recovered.

2. The Ganeshwah, after many changes of head takes off from the Chenab at Langar Sarai. Its length is 28 miles and irrrigates 5,806 acres, paying a revenue of Rs. 10,487. The Ganeshwah was dug in the time of Nawáb Muzaffar Khán by the villages which it was to irrigate. It was then called the Ghouswah. In the time of Sáwan Mal its name was changed to Ganeshwah which it still keeps. In 1879, a new branch called the Walíwah was added to the Ganeshwah. It leaves the main canal at the village of Khánpur and runs parallel with it for twelve miles. It irrigates the country west of the Ganeshwah.

3. The Toláwah has a length of six miles. It irrigates 1,025 acres, paying a revenue of Rs. 1,777. It was dug by

the villages of Doábá, Talíri, Lálpúr, Hajipur and Chak Chajrá, in the time of Mulráj, Governor of Mooltán, under the supervision of Raizáda Tola Rám, Kárdár of Muzaffargarh.

4. The Talíri is the largest canal in the Muzaffargarh Tahsíl. The main line is 12 miles long. It has the following branches:—

The Talíri Canal.

Hájíwah	...	13 miles.
Khánwah	...	6 „
Pírwah	...	4 „
Nángníwah	...	5 „
Khokharwah	...	3 „
Núrwah	...	4 „

The whole length of the Talírí and its branches is 47 miles. It irrigates 14,004 acres of the richest land in district, paying Rs. 32,829. The Talíri was originally a side channel of the Chenab. Its name then was "Trai lare" or "Three branches" now corrupted to Talírí. In the time of Sáwan Mal it was improved and made into a canal and connected with its branches, all of which are older than the main line, having been dug in Nawáb Muzaffar Khan's time. The course of the Talírí had lately become very tortuous, and in 1875-76 the irrigators agreed to supply 30,000 laborers to straighten it. They were assisted by a money grant of Rs. 4,000. Loops were taken out of it, which reduced the length of the main line from 16 to 12 miles.

5. The Gajjúwah is 5 miles long. It irrigates 826 acres, paying Rs. 1,505 revenue. This canal is not under Government supervision, but is managed by Allah Dád Khán, the Honorary Magistrate of Khángarh, whose ancestors, with other proprietors, excavated the canal. He owns lands in the village of Gajjúwáhan. Hence the name of the canal.

The Gajjú Canal.

6. The Jhangáwarwáh has a length of 17 miles, including its branches. It irrigates 7,795 acres, paying a revenue of Rs. 13,359. It was dug during the Baháwalpur rule by the villages which irrigate from it. For the last ten years this and the Ghazanfar canal have had one head. In 1880 separate heads have been made. The heads of both canals are in the village of Kuthela. The irrigators on the tail of the Jhangáwarwah have had great fights with the Kuthela people. The canal is said to have been named from jang, a fight. Besides the Ghazanfarwah, which has hitherto been considered a branch of the Jhangáwar, there is another branch called the Muhammadpuri.

The Jhangáwar and Ghazanfar Canals.

7. The Alíwah canal has a length of 4 miles. It irrigates 1,139 acres paying Rs. 1,378 land-revenue. It was dug in the time of Sáwan Mal by the villages which irrigate from it. It was named after one Alí who managed the excavation.

The Aliwah.

8. The Khalíwah has a length of 13 miles. It irrigates 5,018 acres, paying a revenue of Rs. 5,971. It was dug in the time of the Baháwalpur Government by the villages which irrigate from it.

The Khaliwah.

Besides the canals above mentioned, there are two small canals, the Langarwah and Jhalárínwah, but they are now much neglected. All the Chenab canals above mentioned are in the Muzaffargarh Tahsíl. The Jhandúwah branch of the Khalíwah irrigates part of the villages of Kalarwálí and Rukanwálí in the Alípur Tahsíl.

The Langarwah and Jhalárinwah.

There is a canal now disused, called the Nángwah, which used to have its head in the village of Makhan Belá, opposite Alipur, which might easily be restored.

The Nángwáh.

17. The marked difference between the Chenab and Indus canals is, that the former mostly have their heads in the main stream of the river, while the latter take off from side-channels, and their heads are therefore protected from erosion. The side-channels known as the Chitá meaning "Mad" leaves the river a little south of Márí in the Bannu District, where the Indus emerges from the Salt Range, and is nearly continuous to about the middle of the Muzaffargarh District at a point a little south of the town of Kinjar. The banks of the Chitá are low, and though fairly permanent, it is apt to change its course. West of the Chitá, between it and the high bank, fed by the Chiát, and running for the most part parallel with it, are other natural channels of a more permanent character. Beginning from the north these are in succession :—The Garku, Magassan, Maggí, Súk and Dingá. South of Kinjar, the Chitá disappears, and for the rest of the length of the Indus in this district, the feature of a double set of side-channels is lost. The remaining canals below the Chitá take off either from the Indus or from small side-channels, within a short distance of it. It is a question whether any real efficiency of the Indus canals can be secured which does not embrace the study and improvement of the side-channels of the Indus.

Indus Canals.

Beginning at the north-west corner of the district where the Indus enters it, the first canal we come to is the Gulzári which irrigates the village of Ahsanpúr. This canal has been much neglected. Its head is in the Chitá, but it only works when that channel is in the high flood. It is not regularly cleared.

Gulzári Canal.

'Garku or Matka series.

South of Gulzári comes a group of four canals. The Hinjrái, Dín Muhammad, Khán Chand and Nángní. This group is called the Garkú series in canal official language, because the canals have their heads in the Garkú nálá which is fed by the Chitá. In Settlement records the group is called the Matka series after Mián Matka, a Kárdár of Dairá Dín Panah under the Sikhs, who excavated or improved every canal in the group. The Hinjrái and Dín Muhammad have a common head in the Garkú. The Khán Chand and Nángní have also a common head. The Khán Chand, according to tradition, was once much longer, and used to irrigate as far south as Gujrat, which is 28 miles south of the present tail of the Khán Chand. The Nángní is named from Náng, a snake, in consequence of its tortuous course. The Garku or Matka series irrigates 9,175 acres near the town of Dairá Dín Panah, paying a revenue of Rs. 13,239.

The Magassan series ; Fazalwah, Choudhríwah, Ganda Bhubhar, Ganda Parihar, Rajjuwah, Karia Choudhri, Sardarwah, Nángní Khurd, Nángní Kalán, Ján Mohammad, Pírwah, Hamzawah, Degari, Chákar Khán, Trund, Chuán.

The Magassan channel has its head in the Chitá, and feeds the 16 canals mentioned in the margin. The main line of the Magassan is 12 miles long. The canals which it feeds irrigate 30,393 acres, paying a revenue of Rs. 40,164. The country, from 3 miles north of Kot Adu to 5 miles south of Sanáwan, is irrigated by this series, and its branches reach far into the Thal. The careful clearance of the Magassan is of the most vital importance. In 1879 the clearance was neglected, and the area irrigated fell to 14,000 acres,—a falling off of 18,000 acres. The main canals of this series are as follow :—The Fazalwah, which was excavated under the supervision of Fazal Hossain, Tahsíldár, in 1862 A. D. It irrigates 1,074 acres, paying Rs. 1,404 in the neighbourhood of Kot Adú. The Choudhríwah was excavated 90 years ago by Choudhri Pairá Rám, grandfather of Kírpa Rám, the present Choudhri and Zaildár of Kot Adú. It irrigates 3,242 acres, paying Rs. 4,382. The Sardárwah was excavated in the time of Nawáb Muhammad Khán of Mankera. It has four branches—

The Múhammadpurí.
The Khánpurí.
The Kariá Gáman.
The Kariá Sanánwán.

It irrigates 7,831 acres, paying Rs. 10,181 revenue. It is capable of great extension into the Thal. The Chákar Khan was originally excavated by a colony of Gurmání Biloches in the time of Nawáb Muhammad Khán, and after many changes of channel and name fell into the course made for it by Chákar Khan, a lawless chief of the Gurmánís, who was alive at the beginning of British rule, and about whom Mr. Simson, Settlement Officer, in 1854 A. D., writes in very uncomplimentary terms. The Chákar Khan irrigates 4,068 acres, paying Rs. 5,185 revenue. The last canal of the Magassan series is the Chuán, which

means a coruscation, a meteor. Unfortunately for its name it is one of the slowest-running canals in the district. It was excavated in the time of Nawáb Muhammad Khan, under the supervision of Hamíd, Kárdár. It irrigates 3,358 acres, paying Rs. 5,065 revenue.

The Maggí, Súk and Dinga series.

South of the Magassan is the Maggí channel, which is fed direct from the Indus. One canal, the Khudádád, has its head in the Maggí. It irrigates the Thal country about Mahmúd Kot. Itw as excavated under Hamíd, the Kárdár before mentioned. It is 13 miles long, and irrigates 3,395 acres paying Rs. 5,065 revenue. It was renovated in the time of Mír Muhammad, a noted Tahsíldár of Kot Adu, who named it the Khudádád. After sending out the Khudádád, the Maggí divides into two branches—the eastern branch is called the Súk, "dry," and the western the Dinga or "crooked"—each of which feeds a group of canals.

The Súk series.

The Súk series comprises the Kotwáh, the Háji Ishákwáh, the Jhákhriwáh, the Sánhwáh, the Thalwáh, and the Sardárwáh Khurd.

The Kotwáh.

The Kotwáh was dug in British rule by the villages which irrigate from it. It is 8 miles long, and irrigates 3,025 acres paying a revenue of Rs. 3,815. It irrigates the country round Mahmud Kot, whence it derives its name.

Háji Ishákwáh.

The Háji Ishákwáh was excavated in the spring of 1878, and irrigates the country round Gujrát and Mahmúd Kot. The villages that benefit by it subscribed Rs. 1,500, and Government contributed Rs. 500. It irrigates 2,359 acres paying Rs. 2,809 revenue. It is 5 miles long. It is named after a robber-saint whose shrine is in the village of Gujrát. At this point the canals which owe their origin to Nawáb Muhammad Khan of the Thal begin to end, and we enter the country ruled successively by the Mirháni, Gujar and Kalhora governors of Dera Gházi Khan, and which, after the Sikh conquest in 1830, was farmed by the Nawáb of Baháwalpur. At the same point we leave the Sanánwán Tahsíl and enter the Muzaffargarh Tahsíl. The heads of the next four canals are in Sanánwán, but they irrigate mostly in the Muzaffargarh Tahsíl.

The Jhákhriwáh.

The Jhákhriwáh was excavated first in the time of the Nawábs of Baháwalpur. It was afterwards improved and extended by Malik Gámún Jhákhar, a famous zamíndár who owned land in various parts of the district, and whose descendants still live in Kotlá Gámún, in the Alípur Tahsíl. In its best days it reached to Daira Vadhú, 12 miles further than its present tail, which is in the village of Sabzojat. It is 15 miles long, and irrigates 7,002 acres paying Rs. 9,518 revenue. Its operations extend through the Thal of the Muzaffargarh Tahsíl, and magnificent crops of indigo are grown on it. The Jhákhriwáh is named after the tribe to which its improver, Malik Gámún, belonged.

The Thalwáh.

The Thalwáh is the last of the canals dug in the governorship of Muhammad Khan, the Nawáb of the Thal. Its length is 10 miles; it irrigates 4 villages of the Sanánwán Tahsíl and 24 villages of the Muzaffargarh Tahsíl. The area watered by it is 5,254 acres paying Rs. 7,589 revenue. Its influence lies entirely in the Thal, and, like the Jhákhriwáh, fine crops of indigo are grown on it. The Sánwáh was dug in the time of one of the Gházi Khans. It irrigates 1,836 acres paying Rs. 2,799 revenue. Its length is 7 miles. At one time it refused to run, and the irrigators consulted a Thal saint, Muhib Jahániá, who told them that a buffalo-bull (Sánh) would come out of the Súk, and that they were to follow it and dig a new canal along the course which the bull took. Hence its name the Sánwáh.

The Sardárwáh Khúrd.

The Súk at its southern end narrows into a very small channel, which is treated as an artificial canal and kept cleared. It irrigates 854 acres paying Rs. 1,179 revenue. The name of this channel is the Sardárwáh Khúrd.

The Dinga series.

The western branch of the Maggí is the Dinga, or "the crooked," which feeds the following canals:—

The Kálúwáh.
The Sardárwáh Kalán.
The Sardárwáh Khúrd.
The Nángni or Nángwáh.

They irrigate the apex of the Thal and the country about Kínjar.

The Sardárwáh Khúrd.

The Sardárwáh Khúrd was excavated seventy years ago, under the government of Baháwalpur. It irrigates 725 acres paying Rs. 1,169 revenue.

The Kálúwáh.

The Kálúwáh was excavated in 1839 A.D. by Diwán Sáwan Mal. At that time there was a great famine (kál), said to have been caused by the advance of the British army with Sháh Shuja to Kandahár, and the canal was named after kál, the famine. The Kálúwáh passes through the country at a high level, and is a first-rate irrigator. The Sháhgarh Dhand is used as an escape for its surplus water. The Kálúwáh irrigates 3,322 acres paying Rs. 4,799 revenue. Its length is 8 miles.

The Sardárwáh Kalán.

The Sardárwáh was excavated two hundred years ago by one of the Gházi Khans, and improved about fifty years ago by Diwán Sáwan Mal. Its length is 16 miles. It irrigates 14,781 acres paying Rs. 25,499 revenue. This canal wants an escape badly for its surplus water, which does great damage at and about the village of Pakká Ghalwán. The road from Khángarh to Kínjar is sometimes rendered impassable by the floods from this canal.

The Nángwáh or Nángni.

The Nángwáh was dug by the villages near Kínjar; the date of its excavation is not certain. Its length is 14 miles. It irrigates 1,993 acres paying Rs. 7,573 revenue.

The Chitá series.

The next group of canals have their heads in the Chitá channel. They are as follows:—

Adilwáh.	Bihishtiwáh.
Pírwáh.	Sardárwáh.
Rájwáh.	Ghílúwáh.
Rerhúwáh.	

The Chitá is here called also the Guthú, and, where it passes through the village of Dárín, the Dárínwála Dhand.

The Adilwáh.

The Adilwáh was dug by the villages which irrigate from it under the supervision of one Adil, an agent of the Baháwalpur government. It is 12 miles long, and irrigates 10,546 acres paying Rs. 15,870 revenue. It is a first-rate irrigator, and often continues to run through the cold season.

The Pírwáh.

The Pírwáh was originally dug, twenty years ago, by a combination of three villages, Rohillánwálí, Bhundewálí and Ponta Malána, which are said to have spent Rs 15,000 on it. Afterwards other villages obtained water from it. On this canal occurred the only case known in the district of selling irrigation rights. Ali and others, of Ponta Malána, sold two-eighths of their right in the water to the village of Rohillánwálí for Rs. 200. The village of Rohillánwálí has been treated rather badly this year (1880). An escape has been dug to carry off the surplus water of the Talírí canal system. This escape passes through the western part of Rohillánwálí and cuts through the Pírwáh, preventing water from reaching the village. The Pírwáh is 13 miles long, and irrigates 2,322 acres paying Rs. 3,125 revenue. A masonry aqueduct should be made to carry the Pírwáh across the Rohillánwálí escape.

The Rájwáh.

The Rájwáh was dug in the time of the Baháwalpur government, and irrigates the country in the neighbourhood of the large village of Mahrá. The canal is named from Ráj, a local word meaning people, subjects, showing that the canal was dug without assistance from the government. The Rájwáh is 9 miles long, and irrigates 3,671 acres paying Rs. 5,710 revenue.

The Rerhúwáh.

The Rerhúwáh was dug during the government of Baháwalpur by the following nine villages:—Metlá, Bastí Jhangar, Hasanpúr, Kachá, Gindi, Khákhi, Kushak, Alúdewáli, Thakránwála and Mohriwála, which are said to have spent Rs. 7,000 on it. Its name means "the roller," from rerhan, 'to cause to roll." It is 12 miles long, and irrigates 4,315 acres paying Rs. 6,277 revenue.

The Bihishtiwáh.

The Bihishtiwáh was first dug in the time of the Gházi Khans. After running for forty years it became unserviceable. In 1861 the irrigating villages subscribed some money, and, having got Rs. 5,000 takávi from Government, renovated the canal and dug a new head to it. The Bihishti crosses the country at a high level, and is a first-rate irrigator. It waters 5,047 acres paying Rs. 5,087 revenue. With the Bihishti we enter the Alípur Tahsíl.

The Sardárwáh.

The Sardárwáh was dug by a combination of villages under the government of Baháwalpur. It waters a few villages of the Muzaffargarh Tahsíl and the country about Shahr Sultán. It runs at a high level, and first-rate crops of sugarcane, indigo and rice are grown on it. It is almost too good an irrigator, for it occasionally floods the country. It badly wants a regulator near its head and regulators at the heads of its branches. It irrigates 9,073 acres paying Rs. 9,676 revenue. Its length is 17 miles.

The Ghílúwáh.

The Ghílúwáh is 7 miles long, and irrigates the south-western corner of the Muzaffargarh Tahsíl. It irrigates 2,453 acres paying Rs. 3,083 jama. From this point to the extremity of the district the canals do not group themselves round side-channels of the Indus, but have their heads singly in the river or branches of it.

The Puránwáh.

The Puránwáh is an old channel of the Indus, which about one hundred and fifty years ago dried up and received the name of Purán, "the old." About this time the Nawáb of Baháwalpur levied one labourer per well from the villages which would benefit, cleared out the old channel, and made it into a canal. In 1840 A.D. the canal had become unserviceable. In 1844 Diwán Múlráj, Governor of Mooltan, contributed Rs. 4,000, and levied Rs. 12,000 from the irrigating villages, and again excavated the canal. Up to 1876 it was neglected. In that year the irrigators supplied an additional number of labourers, and Government contributed Rs. 4,000, and the canal was again cleared and made into a very fine work. The Purán has 38 large branches besides small distributaries. It irrigates 34,010 acres paying Rs. 40,130 revenue. Its length, including branches, is 105 miles; excluding branches, the length of the parent canal is 29 miles. The chief branches of the Puránwáh are—

The Bakhíwáh.
The Kapre Khas (clothes snatcher).
The Nimánáwáh.
The Kutabwáh.
The Pírwáh.
The Khánwáh.
The Baháwalwáh.
The Kádirwáh.

The Suhrábwáh.

Every government that ruled this country has had a hand in the Suhrábwáh. The Nawáb of Gházi Khan dug it. He was followed by the Baháwalpur ruler, who levied one pai* per path† of grain as water-rate for having improved it. In the time of Sáwan Mal, a new head was dug. Two new heads were dug during British rule. The Suhráb has two large branches, the Mughalwáh and Ratanwáh. The latter was renovated in 1879. The Suhráb irrigates 5,203 acres of very good land, paying Rs. 8,191 revenue, in the neighbourhood of Jatoí.

* A pai is equal to 16 sérs. † A path is equal to about 32 maunds.

The Chhalíwáh.

The Chhalíwáh was originally an independent canal, having its head in the Sohní Dhand, which flows between Jatoí and the Indus. It was dug by Kází Ghulám Murtaza, when Tahsíldár of Alípur. The Suhráb now tails into it, and it is really part of the Suhrábwáh. The Chhalíwáh irrigates 1,304 acres paying Rs. 2,028 revenue.

The Sulemánwáh.

The next two canals, the Sulemánwáh and Khánwáh, present a new feature—they only work when the summer level of the Indus is low. When the flood rises high, all traces of these canals are lost in the general submersion. The Sulemánwáh has its head in a side-channel of the Indus, here called Mochíwálá Dhand, from the village through which it passes. It was dug during the Baháwalpur government, and named after the Kárdár, Sulemán Khán. It irrigates 3,301 acres paying Rs. 3,866 revenue. It is 14 miles long. If the floods are moderate, fine rice crops are grown on it.

The Khánwáh.

The last canal before we reach the junction of the rivers is the Khánwáh. It was dug during the government of Baháwalpur. Its head is in the village of Bosan and it is fed by the Khákhí Dhand. It irrigates 590 acres paying Rs. 702 revenue.

The canal geography of Muzaffargarh has now been described. There are other small water-courses and distributaries; for an account of these, and for a more detailed account of each canal, the canal record must be referred to. The canal geography is not very easy to grasp. The canals are very numerous, and the same names occur over again; but if their grouping into series is studied, it will be easy to remember them. The 11 Chenáb canals must be studied separately, for they admit of no grouping for two-thirds of the length of the district. The Indus canals arrange themselves into the following groups according to the side-channels by which they are fed:—

1. The Garkú or Matká group.
2. The Magassan group.
3. The Maggí group.
4. The Súk group.
5. The Dingá group.
6. The Chitá group.

South of this last remain the four independent canals—

Purán.
Suhráb plus Chhalí.
Sulemánwáh.
Khánwáh.

There are six Nángwáhs or Nángní—one in the Garkú, two in the Magassan, one in the Dingá series, one is a branch of the Talírí, and the disused Nángwáh in the Chenáb opposite Alípur. All these are named from their snake-like tortuous course. There are five Sardárwáhs—one in the Magassan, one in the Súk, two in the Dingá

and one in the Chitá series. There are three Pírwáhs—one in the Magassan, one a branch of the Talírí, and one a branch of the Puránwáh. There are three Khánwáhs—one a branch of the Talírí, one a branch of the Purán, and one independent Khánwáh, the most southern of all the Indus canals. The Khánwáhs were all dug in the government of Baháwalpur, the ruler of which is here known as the Khan.

Protective embankments.

18. It has already been stated how exposed the district is to floods; in order to check them, a number of protective embankments have from time to time been erected. The most important protective works are those along the line of the Indus.

Sanánwán band.

The largest of these begins at Kot Sultán, in the Dera Ismail Khan District, and, after a course of 28 miles from north to south, ends at Sheikh Umar on the bank of the Sardárwáh, which issues from the Magassan. It protects the northern part of the Sanánwán Tahsíl, and the town and neighbourhood of Muzaffargarh, from the floods of the Indus. All the canals of the Garkú and several of the Magassan series pass through this embankment, and are provided with masonry regulators at the points where they cross it. It was begun in 1872 by a combination of land-owners of the Sanánwán Tahsíl, and was finished in 1874 by the Department of Public Works.

The Sheikhánwálá band.

Sheikhánwálá embankment runs parallel with the Chúán canal for a mile and a half. The Háji Ishák canal crosses it, and is provided with a regulator. This embankment protects the villages near Mahmúd Kot. It was made in 1880, and cost Rs. 2,000.

The Aráín band.

Between the southern end of the last-named embankment and the northern end of the Aráín embankment is a tract of unprotected country about 8 miles wide. The Aráín band begins in Habíb Douná on the border of the Sanánwán and Muzaffargarh Tahsíls, and runs five miles south till it ends in the village of Gulkáim Mastoí on the bank of the great Sardárwáh, which issues from the Dingá Nála. It protects the country around Kureshí. It was made in 1875 by a combination of land-owners.

The Kínjar and Mahrá band.

From the southern end of the Aráín embankment to the village of Bastí Lundá comes another unprotected tract of about 6 miles wide. The embankment, known as the Kínjar and Mahrá band, begins in Basti Lundá, a village just north of Kínjar, and runs south for 12 miles, and ends at the head of the Purán canal in Bet Káim Sháh. This band protects the country about Kínjar and the whole of the south of the Muzaffargarh Tahsíl. It was made in 1875 by the people. It is in bad order, and needs repairs. It requires to be supplied with regulators where the canals intersect it. Then occurs another unprotected tract of 14 miles. The Kot Ratá embankment begins on the bank of the Suhráb

The Kot Ratá band.

canal in the village of Bílewálá, and, after running 11 miles in a south-south-westerly direction, ends in the village of Jatoí. It protects 26,544 acres paying Rs. 14,600 of revenue, the town of Jatoí, numerous hamlets and three canals. The work was executed in 1879 by the villages protected, with the help of a money grant of Rs. 1,200.

The Alíwálí band.

Due west of the southern end of the Kot Ratá embankment is the northern end of the Alíwálí embankment, which begins in the village of Jagmal, and runs due south for 8 miles, and ends in the village of Bazwálá. It was erected in 1879 by the villages which benefited from it. This embankment protects 11 villages and parts of villages containing 11,131 acres assessed at Rs. 7,601, the town of Alípur, and the tahsíl, thána and dispensary buildings.

Requirements of the district for protection from floods.

19. The Alíwálí is the last of the Indus protection embankments. It has been shown that there are a succession of these works along the bank of the Indus. Between them are considerable intervals of unprotected country. The northern part of the district is protected by the Sanánwán embankment, which is a very complete work, and is provided with regulators for letting the canals pass through the embankment. What the district requires for its thorough protection is that the Sanánwán embankment should be prolonged to the southern end of the district, and that regulators should be built where each canal crosses the embankment. The small embankments above described could be utilised by being absorbed into the line of the continuous embankment. If the side-channel of the Indus were improved so as to run throughout the year, and if the Indus embankment were made continuous along the whole length of the river, this district would have little left to desire in the matter of irrigation and protection from floods.

The Chenáb bands.

20. The floods in the Chenáb are much less destructive than those of the Indus. The protective embankments are fewer and shorter on the Chenáb than on the Indus.

The Guthúwála embankment.

The most northern is the Guthúwála embankment, which is one mile long. It is in the village of Murádábád, 10 miles north of Muzaffargarh. When the Chenáb is high, a flood finds its way inland at this point, and, flowing between the Ganeshwáh and Talírí canals, injures the country as far south as Muzaffargarh. To stop this flood this embankment was made in 1879.

The Wafádárpur band.

The Wafádárpur embankment was made in the time of the Sikhs along the bank of the Talírí canal. In 1876 the former bed of the Talírí was deserted and a new line dug. The embankment fell into disrepair. It was renewed in 1879-80. It is 5 miles long.

The Thatah Kureshí.

The Thatah Kureshí embankment was made in the time of the Sikhs to protect Khángarh and its neighbourhood. It is 3 miles long.

The Kháng arh embankment.

The Kháng arh embankment was also made in the time of the Sikhs. It is 7 miles long, and protects Kháng arh and Ghazanfargarh.

The Makhan Belá embankment.

It has already been stated that the country round Rohillánwálí is so low that in flood-time the waters, both of the Indus and Chenáb, find their way into the interior of the district. To check the Chenáb waters at this point, the Makhan Belá embankment was made from Kot Dádan to Mochíwálí. It is 8 miles long. The Kínjar embankment tries to do the same duty by the waters of the Indus at the corresponding point on that river.

The Khairpur band.

21. At a distance of 28 miles from the southern point of the district and equi-distant from the Indus and the Chenáb, the town of Khairpur stands in the centre of the country that is annually submerged. Khairpur is the largest town in the Alípur Tahsíl, and a place of considerable trade. To protect it from floods, a circular embankment 5 miles in length was made round the town. The embankment was nearly destroyed in 1874 and renewed in 1875.

Government rakhs.

22. The Government waste land deserves a mention here, only to avoid misunderstanding. If it were not for this, it would have no more part in an account of the physical geography than the small patches of Government cultivated land which there are in the district. The district is fairly well cultivated, and the cultivation, even in the Thal, is generally equally distributed throughout the country. The district does not, like the other districts of the Mooltan Division, consist of a fringe of cultivation on the banks of the rivers enclosing vast tracts of waste land. I don't suppose that in the extra Thal country at any time within the memory of man, a block of ten thousand acres of waste land could have been discovered which was not intermixed with cultivation and habitations. In the Thal only, one block of 113,613 acres could with difficulty be formed into a rakh, and even that includes cultivated land. The misapprehension referred to is the idea that this district is similar to Mooltan, Jhang and Montgomery with their immense inland tracts of waste land. One of the greatest administrative mistakes that was ever made, and the disastrous effect of which has only just been removed, was to direct the waste land and grazing-tax in Muzaffargarh to be brought under the same system as that in force in the other districts of the Mooltan Division. Similar mistakes are constantly occurring. The total area of the Government waste, by the statements of the settlement just concluded, is 311,554 acres. The demarcation of the rakhs was effected for the last time at this settlement, and will be referred to when the operations of the settlement are described.

Climate, rainfall, health.

23. The great feature of the climate is its exceeding dryness. From May to September the heat during the day is intense, but a cold wind springs up regularly at about eleven, which makes the nights very endurable.

From November to February the cold is great and severe frosts occur, which injure the cotton, mangoes and turnips. The following statement of rainfall has been compiled from the official returns. I am very incredulous about the years which show as high a rainfall as 20, 21, 24 and 29. This score must have been made in the days when Tahsíldárs thought tenths were inches. Judging from the experience of the last 7 years and from the rainfall of the neighbouring districts, I should say the average rainfall was 6 inches. From June 1879 to June 1880 only one-tenth of an inch fell. The distribution over the year is usually as follows :—

There is a shower or two in December and January, another in March and April; severe hailstorms often occur in these months. Another fall or two occurs in July and August, sometimes as early as June. If the district gets the rainfalls as I have described them, it has received its fair share.

Statement showing the yearly rainfall in each tahsil, from 1861-62 *to* 1879-80.

Name of Tahsil.	1861-62.	1862-63.	1863-64.	1864-65.	1865-66.	1866-67.	1867-68.	1868-69.	1869-70.	1870-71.	1871-72.	1872-73.	1873-74.	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	Total average of 19 years.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
Muzaffargarh	4·7	3·9	9·6	7·6	2·1	1·1	6·4	4·5	6·2	5·9	4·6	7·4	7·5	5·6	5·4	10·7	10·6	11	1·5	6·1
Alipur ..	2·5	3·4	4·8	5·4	..	1·3	6	1·9	29·4	5·1	2·1	12·1	9·5	16·7	4·9	18·9	19·1	17	1·6	8·5
Sanánwán ..	4·9	12·7	12·1	21·9	1·3	10·9	22·2	22·2	24	20·4	5·3	7·6	4·8	10·5	7·6	3·1	2·9	10·3	3·1	10·9

The following notes on the health of the district have been furnished by Dr. J. Connor, who has been seven years Civil Surgeon :—

"The diseases most prevalent in the district are malarial fevers, skin and eye diseases, enlarged spleens, bronchitis, pneumonia and ulcers. The fevers, intermittent and remittent, prevail from September to the middle of December, the worst month being generally October, during which month very few escape one or more attacks of either one or the other form of it; they are not severe in their nature, but when once attacked by either, repeated relapses are frequent; this in the end leads to sequata in the shape of dysentery, bronchitis, pneumonia, and enormous spleens, and thus often causing death indirectly. Skin and eye diseases prevail throughout the hot season; they are due to heat and the careless and dirty habits of the people. Next to fevers, these are the most common diseases of the district. Bronchitis and pneumonia prevail from November to April; they are very severe and fatal, and, I believe, are more frequent in this district than in any other in the Punjab. The causes appear to be the great range of temperature during the cold months, the want of proper clothing, and the generally impaired state of the constitution of the people from previous repeated attacks of fever. I believe that a very great proportion of the deaths during the cold months is due to these two diseases, though fever is generally stated to be the cause.

"Ulcers are very common throughout the year; they are usually very large and slough-ing, and difficult to cure, and often originate from a very trivial cause, such as prick, scratch, pimple, or sting of an insect; people with enlarged spleens being particularly liable

to them. Enormous spleens, the sequel to repeated attacks of ague, are met with everywhere, especially amidst the karárs and poorer classes. Eventually this disease is indirectly the cause of much mortality in the district. Dysentery and diarrhœa are not common, and cholera is almost unknown. Small-pox is occasionally very prevalent during the spring, and measles more so. Stone and goitre are often met with. Europeans, as a rule, enjoy very good health in the district.

"The rule of health prescribed by indigenous medical authority is as follows :—

Chetr Visákh ghume.
Jeth Hárh sumhe.
Sáwan Badrá dháwe.
Assú Katen thorá kháwe.
Tabibán pás na jáe.

"Travel in Chetr and Visákh (March to May), sleep in Jeth and Hárh (May to July), bathe in Sáwan and Badrá (July to September), eat little in Assú and Katen (September to November), and you will not have to visit a doctor."

Metals and minerals.

24. There are no metals found in the district, and the mineral products are extremely unimportant. Kankar is occasionally seen, but in such small quantities as not to be worth collecting. Earth salt used to be largely manufactured during former governments, but is now prohibited. The descendants of the old Nunárís, or salt-makers, are common. The majority have taken to agriculture, but not a few have become charcoal-burners. Saltpetre used to be made in the district. In 1861 there were 27 saltpetre pans in the district, paying each Rs. 4. There was an establishment, costing Rs. 120 a year, to look after the destruction of the edible salt involved in making saltpetre. It is not surprising to find it reported in the same year that the manufacture ceased.

Soils.

25. The following are the well-known divisions of soils. The classification is based on the proportions in which sand and clay are combined in the soil. Soil impregnated with salt has a separate name. Every soil is underlaid with sand at a greater or less depth :—

1. The best soil is milk. It is a rich friable loam of a soft brown colour, and produces good crops of all kinds. The substratum of sand lies at a considerable depth.

2. Gas or Gasár ranks next to milk, from which it differs in containing a greater admixture of sand.

3. Draman or dramar consists of a thin layer of clay on the surface with sand below. It requires constant irrigation, but with plenty of water produces the best crops of indigo. It is easily exhausted, and after bearing a crop is often allowed one or two years to recover before another crop is grown.

4. Retlí or Taplí is a soil in which sand preponderates largely. It is not, however, necessarily an inferior soil, with abundant irrigation; it bears first-rate wheat and indigo. The wheat crops in the Thal, where this soil abounds, if the rainfall is large, are heavier than in any other part of the district.

5. Rapar or Rap is a hard stiff black sour clay soil. It dries slowly and splits into large clods as it dries Seed germinates slowly in it, and it requires plenty of irrigation to bring a crop to perfection. A local proverb describes the esteem in which it is held :

> "Rapr Raháwan maghaz khapáwan."
>
> "To cultivate Rapar is to waste the brain."

Still Rapar bears good crops of rice and Sánwak.

6. Kalar, kalar shor and kalaráshí is a soil impregnated with salt. One certainly does see some very ugly kalar, but it is a much maligned soil. All lands in the district contain salt, and even the best sugarcane land will get the powdery surface which denotes kalar, if left uncultivated for a year or two. Though kalar shows itself in a salt efflorescence, yet it is here distinct from that waterlogged condition of soil known in Hindustán as Reh. In this district canal-irrigation cures kalar. The waterlogged state of the soil caused by percolation has no particular name, but the excessive percolating water is called Somán, and produces all the bad effects on crops which are described in the Reh blue books and pamphlets. On the whole, the soils of this district are good, so uniformly good indeed that the divisions are lost sight of. Land is productive or the reverse according as it gets abundant or scanty irrigation. As in the neighbouring districts, the classification of soils was abandoned for assessment purposes, and the different kinds of irrigation formed the basis of the sanctioned rates of assessment. Though the Muzaffargarh farmer will not admit that his soils or indeed anything else is good, still the general excellence of the land forcibly strikes experienced Settlement officials from the Punjab.

Vegetation trees.

26. Although so dry, the district is full of vegetation of great variety. The following is a complete list of the trees :—

Tálhi.

Tálhi (Shísham in Hindustani), *Dalbergia sissu*. I have nowhere seen this tree grow with such luxuriance as it does in this district. There are two fine avenues—one five miles long, leading from Muzaffargarh towards Shershah ferry ; the other from Muzaffargarh to Khángarh, eleven miles long, which were planted by Captain Voyle, Deputy Commissioner, in 1854. Some of the trees have reached a girth of 9 feet. There are older trees of 14 feet in girth.

Kíkar.

Kíkar, *Acacia Arabica*, suffers much from frost, but where it escapes this danger it grows into a very fine tree. The wood is much used for agricultural instruments.

The young branches of the kíkar, bér and jand are cut as fodder for goats and are called "lángi" and "lung."

Sarính.

The sarính (Hindustáni siris), *Acacia speciosa*, grows badly in this district. It sometimes reaches a large size, but the wood is always much worm-eaten.

Jand or kanda.

The jand or kanda, *Prosopis specigera*, is the commonest tree in the district. The rakhs are full of it. Where it escapes being lopped, it attains a fair size, but it is generally stunted and deformed from being cut for lángi. The pods are called shangar, and are used for food. Hindu bridegrooms generally and a few Muhammadans cut a small branch of a jand tree and bury it before marriages. Offerings are made to the jand tree by the relations of Hindu small-pox patients during an attack of small-pox. The wood is used for agricultural implements and fuel.

The Bér.

The bér, *Zizyphus jujuba*, is common, and attains a large size. Near Rohillánwálí are some very fine trees. The dried fruit is called bhugrián.

The Ukánh.

The ukánh, *Tamarix orientalis*, is called túlha while young. It thrives everywhere, and is propagated with ease. A branch stuck in the ground will strike if it gets a little water at first. The manna of this and of the lei is called shaklo. The galls, "main," are used for dyeing and tanning.

The Lei.

The lei, *Tamarix dioica*, called pilchhi in the Punjab and jhau in Hindustan, grows spontaneously wherever river water reaches. The river banks are lined with thickets of it. In classifying land it is an axiom among Tahsíldárs that land which grows lei is culturable. Lei is used instead of masonry for lining wells and for making baskets. It is usually a mere bush, but in the Thal, west and north of Mahmúd Kot, it grows to so large a size as to be worth selling as fuel for steamers.

The Jál.

The jál, *Salvadora oleoides*, grows spontaneously in the Thal and in waste land. The wood is of little value, as the proverb says—

Na kam dá na kár dá,
Ajáyá chughá jál da. =
Of no good and of no use,
Like a worthless log of jál.

The fruit is called pílh, plural pílhún, and is largely eaten by the natives. The dried fruit is called kokir. The leaves and twigs furnish fodder for goats and camels.

The Jhit.

The jhit, *Salvadora Indica*, is common in the south of the district, especially in the inundated parts. I never heard of jhit being put to any use except to make tooth-sticks, "musák," for which use its bitter wood makes it a favorite.

The Karính.

The karính or karítá, *Capparis aphylla*, is common in waste land. It makes rafters and fuel of an inferior sort. The flower is boiled and eaten as a vegetable.

The name of the fruit is delhá. It is made into pickle.

The Ubhán.

The ubhán or bahán, *Populus Euphratica*, grows spontaneously on the banks of the Indus, lower Chenáb, and Sutlej after its junction with the Chenáb, where it escapes lopping; it attains a large size. Its young branches provide fodder for goats. The wood is light, and consequently is used for making beds, door-frames, bair wheels for wells, and rafters.

The Phog.

Phog, *Callingonum polygonoides*. Its habitat is in the Thal, where it is very abundant. It is a small leafless shrub. The wood makes excellent charcoal. The twigs provide fodder for goats and camels. The fruit ripens in May. It is called phogli, and is both cooked as a vegetable and made into bread.

The Khip.

Khip, *Orthanthera himinea*, is a leafless shrub which grows chiefly in the Thal, though I have seen it elsewhere. I never heard of its being put to any use. It is very inflammable; if two pieces are rubbed together they will catch fire.

Ak.

Ak, *Catotropis procera*. Perhaps this should not be classed as a tree, but I have seen specimens 10 feet high with wooden stems nearly a foot in girth. It is usually a shrub. Goats and sheep eat the leaves.

The trees before mentioned are those commonly seen. The following are more rare here, but as they are common Indian trees they require no description:—

Pípal, *Ficus religiosa*.
Bohir, *Ficus Indica*.
Amaltás, here called gardnalí, *Cathartocarpus fistula*.
Lasurá, *Cordia Myxa*.
Rohírá, *Tecoma undulata*.
Gondí, *Cordia rothii*.
Jáman, here called jammún, *Sizygium jambolanum*.
Chhichhrá, *Butea frondosa*.
Phulái, *Acacia modesta*.
Kábali Kikar, *Acacia cupressiformis*.
Sohánjná, *Moringa pterygosperma*.

Pipals and bohirs should be more abundant than they are, for they were carefully preserved by Diwán Sáwan Mal. No one could get leave to cut a táhli tree, even in his own land, without a personal application to the Diwán, and without paying the full price. Even a kikar or ber could not be cut without obtaining the permission of the Kárdár and paying the full price of it, but to cut a pipal or bohir was absolutely forbidden and entailed severe punishment.

Garden trees.

The garden trees are mangoes, pomegranates, apples (here called súf), oranges, limes and figs. The mangoes are superior, and are largely produced. The town of Muzaffargarh imports 500 maunds a year. Mango gardens are common

in the neighbourhood of Khángarh, which is said to produce 2,000 maunds of mango fruit a year, 500 are consumed in Khángarh town and 1,500 maunds exported to Mooltan. Mangoes sell at from 16 to 24 sérs per rupee.

Date palms.

27. The most remarkable plant in the district is the date palm, khaji. The fruit forms a staple of food during part of the year. Every part of the plant has a separate name and a separate use. The trees pay a tax to Government, which furnishes a considerable revenue. The khaji grows in every part of the district, and flourishes in the poorest soil. Dates are divided into nar (male), mádá (female), khasí (neuter), and bogh, which means in Arabic a casing, and, applied to dates, means stoneless. In February, one or more spathes issue from the root of the terminal cluster of leaves. The spathe is called sipí (a shell). As the spathe opens, clusters of tendrils (mál) emerge, covered with little white waxy balls which are the flower-buds. The clusters are called gosha and the buds búr. In April the fruit is the size of a pea, and is called makorá or pippún. At this stage birds begin to eat the dates, and do great damage. In July the fruit has attained its full size and is called gandorá or doká, and those dates are gathered which are to be ripened by being salted called Lúní pind, "salted dates." In July and August the fruit is completely ripe, and is called pind. A few ripen later in the month of Badra (August-September), and are hence called bádrí. A proverb gives a memoriá technica for the various stages:—

Visákh Makorá, Jeth gandorá,
Hárh Doká, Sáwan piud.
Badrá áyá te kadh giá
Khajíwálián de jind."=

"In April-May Makora, in May and June gandora,
"In June-July Doka, and in July-August Pind.
"August and September came and took away
"The Date-eater's life."

Dates are consumed in three forms:—

1. Lánípind, "salted dates."

These are picked when unripe and ripened by being rubbed with salt, and being kept for a day in a tightly-closed jar.

2. Van-de-pind, *i. e.*, dates of the tree. Dates which ripen naturally on the tree.
3. Chírvánpind, *i. e.*, split dates. Inferior dates are split open, the stone is taken out, and the dates are dried.

Dates are either cultivated, in which cases they are called Hath rádh, or grow spontaneously, when they are called apere jamián or gidárián, from a story that they have sprung from stones which jackals have thrown away after eating the fruit. At the end of April, watchers called rákhás are hired to watch the fruit. A rákhá receives from Rs. 3 to 5 per month, a quarter or half a sér of ripe dates in the season, and as many fallen dates as he can eat. A rákhá can watch 200 trees if they are sparse, and up to 400 if they grow thickly. Dates are also preserved by the clusters being enclosed in net work bags made of grass, which are called tora or bags of matting, made of the pinnæ of the date tree, called bindí.

When the dates ripen, pickers (chárhá) are hired. A picker gets from Rs. 4 to 8 per month, a sér of ripe dates a day, and as many dates as he can eat while up on the tree. Around Muzaffargarh he gets 2 chittaks of onions per day and 5 yards of cloth. The picker keeps himself in position at the top of the tree by a thick rope which passes round the tree and under his seat. The rope is called kamand. Picking looks more dangerous than it really is, still there are accidents every year. Pickers are allowed by the owners to give a handful of dates to each passer-by. A handful is called pánjá. Hence the date season is a favourite time for pilgrimages, because the pilgrims need not take food with them, and can subsist on the pánjás. The picked dates are taken to an enclosure called khori, and are exposed to the sun for four days, after which they are ready for storing or export. Dried dates will keep good till November, after which they breed worms. Another mode of drying dates is to boil them in water, then throw away the water, add a little oil and fry the dates till quite dry. In this state dates will keep a year. Such dates are called bhugrián.

Productiveness.

Date trees vary in productiveness, some will bear as much as three maunds. From a number of experiments made by me in 1878, I found that a date tree had from 2 to 20 clusters, and the average crop was 20 sérs. I have, however, seen very much heavier crops than those I experimented on. The Extra Assistant Settlement Officer gives a maund and a quarter as the average crop.

Description of dates.

The different kinds of dates are very numerous, and are hardly to be distinguished from one another. I have specimens of 29 kinds before me, and with the exception of one kind called shingist, which is long and of a bright yellow, the others seem to me all the same.

Parts of a date tree and the use of each.

Every part of a date tree has a separate name and a separate use. The stem is called mundh while standing, and chhándá when cut down and trimmed of its branches. It is used for rafters, and, when hollowed out, for aqueducts. A cluster of stems springing from one stool is called thadá, and a grove of dates is jhat. The leaf stalk is called chharí, and is used for making fences, frames and such light wood-work as in other parts would be made of bamboo. It is also beaten into fibre and used for making ropes. The chharís are cut every year, and the stumps are called chhodá and near Rangpur daphi. The pinnæ are called in the south of the district bahutrá and in the north phará. They are used for making mats, baskets, fans and ropes. The rete or net-work fibre that is formed at the base of each petiole is called kabál, and is used for making ropes. The fruit stalk, with the fruit on, is called gosha, and buhárá after the fruit is picked when it makes an efficient besom. The cluster of leaves at the top of the palm is called gáchá, and in the heart of it is the terminal cabbage-like head called garí, which is edible. The date-stone is called gakar, gakat and geka. The thorns are thúhá.

Diseases of date palms and their fruit.

When a date palm begins to fall off in bearing, it is severely scorched, which is said to restore productiveness. Palms growing in sandy soil often dry up without any apparent cause. This disease is called barâ, a local name for fever. Worms of various sorts attack the fruit while still on the tree. The best known of this is called susari. It is exactly like a weevil. The greatest enemy of the date is continued rain, which, when it occurs, completely destroys the crop.

Dates as food.

The people eat dates for four months in the year. They eat them at their meals, and at all times of the day and night besides. Poor people subsist on dates altogether during the season. In the south of the district, dates are pounded, mixed with flour and made into bread. Dates are sometimes mixed with tobacco and smoked. People eat dates till they are surfeited, and then chew a raw onion and begin eating again. When it is remembered that there are 414,509 female date palms in the district, and that the average crop is a maund and a quarter, it will be seen what a large staple of food dates form. The jama assessed at the Regular Settlement on the date trees is Rs. 19,126. An account of the revenue, past and present, derived from date trees will be given hereafter.

Fodder plants.

28. The following are the most common and esteemed fodder plants. Tala grows everywhere except in kalor and sandy soil. Tala is the dúb of Hindustan. It is an excellent grass for fodder, and is a sign of good soil. Chhembhar in sandy soils takes the place of talá as a fodder grass. It is a prostrate grass that sends out runners. It is surprising to see how fast it grows in the Thal after rain. It is excellent fodder. Drabh is a strong coarse grass with long roots. It grows in all kinds of soils, even in the poorest, and remains green all the year round. It is difficult to eradicate. The agriculturists liken themselves to it in the proverb:—

"Zamindár drabh dí pár him" =
"Ruler changes, but the zamíndár lasts for ever."

Madhánâ is a rain grass of excellent quality while it lasts. It is so called because its flower resembles a madháni or churn-dasher. Tarar or makhnala is another rain grass, and is much liked by horses. Kal or kabbá is also a rain grass, and is excellent fodder while green, but it soon grows hard and uneatable. Lihú is a thistle, and grows abundantly among the rabi crops. It is grazed, and also cut and given to cows and bullocks to eat. Visá is a spreading fleshy leaved plant which grows in the rains. It is eaten by all animals except horses and asses. This is the plant elsewhere called "itsit." Sinjhi is a plant like clover, which bears a yellow flower. It grows wild among the rabi crops, and in parts is cultivated. There is a species with white flowers which is said to give colic to cattle. Jaudal is a plant that grows among wheat and barley, and until seed time it cannot be distinguished from them. The seed, however, is small and

tasteless, while green, it is good fodder. Dodak is a small milky plant which provides fodder for sheep and goats only. The butá is the *Saccharum sara*, often wrongly called sarkáná and munjkáná, which are really names of parts of the plant. This is almost as useful as the date-palm. The wavy leaves at the base of the plant are called sar, and, besides being good fodder, are used for mats and thatch. The tall stem is called kanán, and the upper part of the stem tíli. Kánán is used for making baskets, chairs, walls of huts, screens, roofs, rafters, and fences. The tíli is used for making baskets and besoms. The sheath of the tíli is múnj, and is used for making ropes. The flowers are called bullu, and are given to cows and buffaloes to increase and enrich their milk, and are hence called "makhan sawái" or "butter one and a quarter more." Kánh is the *Saccharum spontaneum*; it is very abundant in the low ground near the rivers which is annually inundated, and in the islands. It furnishes first-rate fodder for buffaloes—and pens are made from the stem. Kháwi is a grass which has a faint lemon smell, it is found in the Thal. Dílá is a rush which grows in marshy grounds. It is inferior fodder. Murak is another marsh plant, it is soft and tender, and much esteemed as fodder. Juság is a plant which is used as fodder and also as a pot-herb it is said to soften other vegetables and meat which are cooked with it. Láná is used in this district only as fodder for camels. Sajji is not made. I am not aware which of the kinds of "láná" it is which grows here. Camel-thorn, here called jawánh (Hindustani jawása), is common. The following plants, which are mere weeds, are also used as fodders:—kharpel, manjhár, sávre, mainán, bhúkan, or bakan, batún or bathún, pit páprá, sín, palwáhán, and patráli.

Plants other than fodder plants.

29. The following are the most common plants, other than fodder plants. The line between fodder and other plants is not very clear, for camels and goats will eat anything. Bhakrá, Hindustani gokhru, (*Tribules terrestris*) grows generally in sandy soils; it has a caltrop-shaped seed-vessel. It is used to cure gonorrhœa. Puth kandá, literally "inverted thorn" (*Achyranthes aspera*) is common in Sanánwán. The leaves are dried, made into powder, and used as an emetic. Damánh (*Fagonia cretica*) is found in the Thal during summer. Camels eat it, and medicine is prepared from it to check impurity of the blood (maláí). Karvílún (*Capparis horida*), the fruit ripens in March and April and is made into pickles; leaves are made into fomentations for sore-throats. Ratkán grows in summer on the banks of the canals, it is used in diseases of horses. Kurtamán, the colocynth gourd, grows in the Thal and in sandy ground, during June and July. It is a favourite medicine for horses. Kanderi, a plant with thorns on the stem, leaf stalks, and leaves with a fruit like potato apples. Phisák, lání (*Sueda fruticosa*) is eaten by camels, and medicine is made of it to relieve the load on the chest of pregnant women. Harmal (*Peganum harmala*) grows everywhere. The seeds ripen in August; mixed with bran and salt, and burnt, they are efficacious in driving away jins and averting the evil eye and the machinations of enemies. Lút is a parasitical creeper of a light-

green colour, that grows on the upper branches of trees. It kills the tree to which it attaches itself. Bhuen phor, literally the earth-splitter, (*Philipœa calatropidis*) this curious plant is very common. In February and March, its stem about an inch and-a-half thick, bursts through the ground, sending fissures all round, and grows from 6 inches to a foot high, and is covered with handsome wax-like flowers. The whole plant is very juicy. It is given to goats to increase their milk, and, when bruised, is applied to boils. It is also given to children to cure impurity of blood. Sítún (*Boncerosia edulis*) is a kind of wild asparagus, which, after summer rains, springs up at the roots of the ját, jand, karita, and phog trees. It is eaten with salt and also cooked as a vegetable. It has a pleasant acid taste. Chibhar is a small gourd that grows wild among the kharíf crop. The fruit is eaten raw, and cooked with meat, on which it is supposed to have a softening effect. Chibharen dí bár, the "threshing floor of chibhar," is used commonly for the "Greek kalends."

"Chibharen dí bár te desi."
"He will pay it at the Chibhar threshing floor," *i. e.*, he will never pay it.

Jatí muság, literally the "Jat's tooth brush," is a small plant with pink flowers, that grows on land subject to inundation. Bhangrá is of two kinds, one kind has blue flowers of which women make collyrium. The other kind grows on the banks of water-courses, and when reduced to ashes, is used for curing galls on bullocks caused by the yoke. Uthpera, literally "camels' foot-prints," is a plant with broad leaves that grows in the Thal. The leaves are dried, pounded and boiled, and used internally for gonorrhœa. Fatokar grows in the hot weather. Its leaves are used by bald men as a hair restorer, and are also good for boils. Bhúkal, literally "buds of the earth," is a plant very like an onion which comes up with the rabi crops. It bears a small black seed which ripens just before the wheat harvest. In times of scarcity, the seeds are ground and made into bread of a repulsive appearance, and very indigestible. Khumbhí, mushrooms, are common in the Thal after rain in the hot weather. They are of very good flavour. Pad bahera is the name for fungi of all sorts. Other plants less known are—

Gorakhpán, dandeli, tandúlá, marirí, reshan, van verí, sijh ubhárá or sunrise, salárá, kaurí valh or bitter creeper, piplí, kaláích buti, níl buti or wild indigo, gídar wár or wild cotton, angári, kánjún, bai phalli and bathún.

Fauna: domestic animals.

30. The domestic animals are camels, buffaloes, cows and bullocks, sheep and goats, horses and donkeys. The Thal furnishes a magnificent grazing-ground for camels which eat the ját, jand and phog, with greediness. Buffaloes are found in large herds in the low lands near the rivers, and are very freely stolen. A regular organisation existed for passing stolen buffaloes up, down, and across the rivers. There were, and probably are, regular stages and appointed receivers at each stage. The cows and bullocks

are very poor. Though this district has good grazing powers, yet, strange to say, it cannot keep itself in working bullocks, which have to be imported from Sindh, Baháwalpur, and the southern part of the Dera Gházi Khan District. The bullocks are badly cared for, ill-fed, and never clothed in winter. The Jat seems to find it more economical to wear out a bullock and buy a new one than to prolong its life by care. The sheep of the Thal are a very fine breed, large and fat; the wool, however, is very coarse. The sheep in the rest of the district are very poor. The Thal goats are fine and good milkers. Those of the rest of the district are not remarkable. There are a number of good mares in the district. Horses are not valued, and colts are often neglected to death, or given away as alms to Mirasís. The district has been neglected as regards its breed of horses, but horse and donkey stallions have this year (1880) been sent to the district.

The following statement shows the number of cattle of all kinds in the district:—

Buffaloes.	Cows and bullocks.	Sheep and goats.	Horses.	Donkeys.	Total.
47,070	157,382	144,870	3,785	5,179	358,286

It is impossible to give the number of camels, because of the difficulty in deciding what camels belong to the district and what belong to other parts. The majority are owned by wandering Jats, whose home is the whole Sind Ságar Thal, rather than a single district. The camel grazing tax may afford an indication of the number. Each male camel pays Re. 1, and each female Re. 1-8 a year. The lease of the camel grazing tax has varied from Rs. 9,394 to Rs. 6,876 per annum. These figures exclude the last two years, during which the district has been drained of camels for Kabul. In 1880 the lease fetched only Rs. 3,636.

All the diseases described in the Montgomery Settlement Report prevail here, and are known by slightly different names. Cow-pox, here called thadri, mái ráni, and sitla, is by far the most fatal. To the diseases given in the Montgomery report I may add patha, a common Punjab disease, on which much has been written in the Financial Commissioner's Selections. There it is attributed to eating jawár only. Here it does not seem traceable to any particular kind of food. I have seen camels get it after eating lei branches, and bullocks after eating turnips. Mihrú is a maggot which cuts its way through the hide of the back into the flesh, and grows to a great size, an inch long and as thick as one's finger. It is said to do no harm, but the flesh swells and the presence of a number of these maggots in the flesh must disorder the system. It seems only to infest cows and bullocks. Chourímár, literally the "shoulder striker," is a kind of paralysis of the

limbs. Pán is the name for itch. Gal ghotu, malignant sore throat, is common and very fatal. Muhárá or múnhkhur, foot and mouth disease, is extremely common. The remedies for all diseases are either (1) counter-irritants, as cruel branding, cutting off part of the ear and putting irritating substances into the nose and ears, (2) superstitious, as getting a fakír to charm the animal, and taking it to a shrine, or (3) inert, as giving ghí or urine to drink. The extravagant remedies used in Montgomery, such as opium, sweet oil, fowls, eggs, and gúr, are not appreciated. The diseases which cause most deaths are thadri, chouṛímár, and gal ghotu.

Wild animals.

31. Tigers are often met with in the dense jungles on the banks of the Indus, towards the south of the district. They do considerable damage to cattle, but rarely attack man unless in self-defence. Still, a case occurred in 1879 of a boy being wantonly killed by a tiger in Bet Isanwála. The local name for tiger is shính. Wolves, here called nahar, are found throughout the district, and wild pigs are extremely common, especially on the banks of the rivers. Wild boars are called mirhún, and wild sows bhúndin. The only deer in the district are párhá or hog-deer; the Indian gazelle, here called haran and in Hindustan chikárá; and the swamp-deer (*Rucervas duvaucellii*). The latter is nearly extinct, its local name is goin. Jackals and foxes are common. Hares are very rare. Otters are found in the south of the district. Hedge-hogs, here called jahá, are common. I have never seen or heard of porcupines here. Mungoose, called here nolon, are very common.

Birds.

32. The following birds are found in the district. Of many I can only give the native name and must leave it to a better ornithologist to classify. All I can vouch for is that the spelling of the local name is correct:—

Doves. The male is gerá, the female tutin.

Sparrows. Native name chiri.

Hoopoe. Local name hudhud.

Wood-peckers. Local name drakhan pakhi, literally the "carpenter bird." The hoopoe is often called by this name.

Peewits, here called tatírí.

Warty-headed Ibis	...	...	Káoni.
Tern	...	...	Karáhí.
Sand piper	...	...	Titúhá.
Pelican	...	...	Pein. There is a larger kind called Sohal pein.
Indian snake-bird		...	Siri.
Crows	...	...	Kán.
Lark	...	...	Chandúr.
Kite	...	...	Hil. Hindustani chíl. In popular belief, the kite is female for six months of the year, and male for the other six months.

Vulture ...	...	Gijh.
Pharaoh's chicken	...	Súndá.
Blue jay ...	...	Chánh. Its flesh is good for colds. To hear or see a blue jay is a bad omen.
Magpie ...	...	Mahtáb.
Striated Bush Babbler	...	Herha.
Bengal Babbler	...	Dad herha.
Parrot.		
Butcher-bird or shrike	...	Malhálá. Both the grey-backed and red-backed species are found. To see a butcher-bird fly is a good omen.
King crow ...	...	Kál karachí. This bird is venerated by Muhammadans because it brought water to Imam Hussain when he was martyred, and also on account of its habits of early rising.
Swallow ...	...	Abábil.
Kingfisher ...	...	Tobá literally "diver" and mamola.
Egrets and paddy-birds	...	Bagla and bag. The young are eaten and considered fattening.
Coot ...	...	Ari.
The Blue Coot ...	...	Kuang—Water rail is khanauti.
Indian Oriole ...	...	Hariáwal.
Avadavats ...	...	Lali and shárak lali. The last name literally means lali weighing a chittak.
Spoonbill ...	...	Doi bag. Literally spoon heron.
Heron ...	...	Sán.
Raven ...	...	Dodar kán and ruhela kán.
Owls, owlets, and goat-suckers ...	...	Ghugh, ulú, chebrí, and huk. Owls and goat-suckers are birds of bad omen. The owl called ghugh is called the kiraká shinh or Kirár's tiger, on account of the superstitious dread in which Kirárs hold it.

The other Raptores are—

Kural ...	...	A large hawk found near water. It lives on fish and wild fowl.

Baz, male.	Jurra, female.
Bashin, male.	Basha, female.
Chapak, male.	Shikra, female.
Laghar.	
Tamtrá.	
Chuhemár.	
Shíhan.	
Charag.	
Bhairi.	

which are all hawks of different kinds. Cormorant, Khambra.

Bittern is here called nardúr. The Grebe is tuháyá.

The birds for which I know no English equivalent are—

Garwának, also called saukan, Lives on the banks of rivers and in sandy deserts.

Níl bulái	...	... Lives on the banks of rivers and near water. A kind of water-rail I think.
Dhíng	...	... Very large crane-like birds which congregate in flocks during the cold season.
Bad dhíng	...	...
Bulbuls	...	... These are common to all India, and are great pests to the gardener.
Phidá		
Dhúrí	...	... A small ash-colored bird with a long tail.
Chhapákí	...	... An ash-colored bird, the size of a dove. If a person who kills a chhapákí touches another with itch, it will be cured.

Tilyar. Vaha. The tilyar is, I believe, a starling, and the vaha, though differing in color, is like a starling in its flight. Both are great enemies to the farmer and are very destructive to dates.

Traklá. This is, I think, the green pin-tailed fly catcher. It is named traklá from a fancied resemblance to the spindle, trakla, of a spinning wheel.

Game birds.

33. The game birds and those usually shot by Europeans are —

The florikin (*Houbara macqueeni*), here called tilór.

Sand grouse.

Partridges black and grey. The female black partridge is called missi.

Quails arrive in great numbers in March and September, but soon disappear. A few remain all the year.

The common, the jack and the painted snipes—

The wild goose, Mangh
Mallard, Nírgí
The spotted billed duck, Hanjhar
Gadwall duck, Buar
Shoveller duck, Gena
The marble-backed duck, Bhurnú
The Brahminy duck, Chakwa
The common teal, Karara
The shell drake or burrow duck { Dáchí
The white-eyed duck, Ruhárí
The whistling teal.

Kunj and plover are common in the lowland near the rivers. The plover is called puliani, "the weaveress," from its gait. It makes a short rapid run, and then stops like a weaveress when preparing her thread.

Pigeons are found all over the district.

34. This district abounds in fish of very excellent quality. The species are not very numerous. I believe the following to be a complete list:—

Fish.

Kanghi (*Ambassis baculis*). This is the only member of the perch family found in the district.

Of the snake-headed fishes two specimens are found.

Chitra (*Ophiocephalus marulius*). This is the sahol or saul of the Punjab.

Guddú (*Ophiocephalus punctatus*). Hindustani and Punjabi garai.

The chitra attains three feet in length. The guddú about eight inches. They have few bones, but are insipid eating.

The spiny eel has two representatives—Goj (*Mastacemblus armatus*); Gujírá (*Mastacemblus pancalus*). Both are good eating and excellent when stewed.

The siluridœ have ten representatives that I know of, and probably more. They are scaleless and good eating, but are as a rule filthy feeders. They will take a baited hook or a spoon bait readily.

1. Singhárá (*Macrones aor*)
2. Malhir (*Macrones tengara*)
3. Khágar (*Macrones cavasius*)
4. Khagá, also called Trikandá (*Macrones carcio*)
5. Ahí (*Pseudotropius atherinoedes*)
6. Dhungana (*Pseudotropius garua*)
7. Dimman (*Callichrous checkra*)
8. Ghoghún (*Callichrous bimaculatus*)
9. Malli, Wallago attu. The boali of Punjab and Hindustan.
10. Luánkh (*Saccobranchus fossilis*)

Hindustani singi. A very ugly fish with eight long thick barbels; each pectoral has a poisonous spine which is said to cause a wound as painful as a scorpion's sting.

The carp family has ten representatives that I know of, and probably more. They are all excellent eating and clean feeders.

Dambhara (*Labeo rohita*) the ráhú of Punjab and Hindustan. This is the best of all the fishes for eating.
Dahí (*Labeo calbasu*)
Sarihan (*Labeo cursa*)
Thaila (*Catla buchanani*)
Morí or morákí (*Cirrhina mrigala*)
Sohnín (*Cirrhina reba*)

The thaila and morí rank next to the dambhará for eating.

Poprí or kharnín (*Barbus sarana*)
Drurá (*Barbus chrysopterus*)
Dará (*Rohtee cotio*)
Paráhí (*Chela gora*)

The herring family has only one representative, the chhuchi clupea chapra.

The notopteridæ have only two species.

Pari or batti (*Notopterus chitala.*) It has a number of eyelike marks near its tail.

Káni pari, or káni batti (*Notopterus kapirát*), literally the one-eyed pari or batti, so called because the eyelike spots near the tail are wanting.

Both the notopteri are full of bones and tasteless.

Besides the fish before mentioned, there is the shahíngar, a small scaleless fish with five dorsal rays, headed by a spine, 10 ventral rays, pectoral fins headed by a spine, four barbels, adipose fin, back yellow with black stripes, whence comes its name shahíngar or tiger-fish, from shính, a tiger. This is probably one of the glyptosternum genus. A fisherman assures me that the following fish with which I am not acquainted complete the list:—

Chhallí
Lákhí gógún
Tukar machhi
Gulá
Patol
Khitha
Makhni

The gángat is a large prawn, and jhingá is a shrimp.

It may be mentioned that the residents of this district generally cannot be trusted to give the names of the birds or fish correctly. To get correct information the fishing and sporting tribes, Jhabel, Kihál, Mor, and Mahtan must be consulted.

Government derives revenue from the fisheries, an account of which and of the fishing industry, will be given further on.

Reptiles.

35. The reptiles of the district are as follow. River-tortoises, which are eaten by the Kiháls, Mors, and Chúhrás, but not by other tribes. Among the sauria are—

1. The snub-nosed crocodile (*Crocodilus palustris*), here called baghún.
2. The fish-eating crocodile (*Gavialis gangeticus*), here called sinsár. The tribes before mentioned eat the flesh of these.
3. The goh.
4. The guhírá. This is said to be the young of the goh, but it seems to be a distinct species.
5. The sánhán, a lizard which frequents sandy grounds. The flesh is used in medicine and is credited with strengthening and restorative powers.
6. Kirari. The common house lizard.
7. Korh kirari. Literally the leprous lizard. It is said to change its colour and may be a kind of chameleon.
8. Khan is a black and white lizard with a bluish tinge. There are all sorts of fables about khans. It does not copulate, but is found full grown in the belly of snakes. It is supposed to be most deadly.

Jai kùn kháwe khan
Ma na dekhe jan.

"He whom a khan bites is as sure to die as if his mother had never seen him born."

It is really perfectly harmless.

9. Galei is larger than the house lizard, and is supposed to be harmless. If a woman touch a galei before she make butter, it will be abundant.

Frogs, the male called dedar and the female did, abound everywhere.

Snakes.

Snakes are very common. The following are the chief kinds:—

There are several varieties of cobras. The names depend on the colors. I give the native names of 12 varieties. It should be remem-

bered that bashyar, mushki, and kálá, all mean black. Chúhrá also means black, because sweepers (chúhrá) are black-complexioned.

1. Bashyar.
2. Mushki.
3. Kálá.
4. Mushki kálá.
5. Chúhrá.
6. Chúhrá mushki.
7. Mushki títará, or partridge black.
8. Mushkí tilyar, starling black.
9. Moti bind, literally pearl drops.
10. Mushki phanyar, the black-hooded, from Sanskrit phan, a snake's hood.
11. Peti baggá, white-bellied.
12. Gal kálá, black-throated.

The natives say that these are all separate species. The bashyar that I have seen had no hood, and is therefore one of the Elapidæ. All the other varieties that I have seen had hoods. The bashyar is believed to be the female of the mushki tilyar. Other poisonous kinds are the sangchúr, literally "throttler," also called gurúhá. This is the *Ophiophagus elaps*. The korkind or kurandi also called jalebi; these three names denote the double coil in which it lies. It is also called kaphra and khar peti from the hardness of its skin. This is the *Echis carinata*.

The charohá, literally "washerman," is a harmless snake.

Other snakes not identified are padam, vais, do-muhán or the snake with a head at each end.

Tír már or ghore dangan, udná or jatal; this is said to be a hairy snake. Salang vásak, also called sáh pívná, the breath drinker, because it drinks the breath of sleeping persons. I have not seen the varieties last named, but give the names as given to me by residents of the district. Wonderful stories are told of some. The vais, for instance, ties the hind legs of buffaloes together with its coils as with a kicking strap and drinks their milk.

Insects.

The insects which force themselves on one's notice are—

Makri or locust.
Tiddi. A grass-hopper most destructive to young crops.
Dánwar. Spider.
Vathúhán. Scorpion.
Dembhún. Wasp, hornet.
Labáná. An earth cricket with formidable jaws that bites severely. Why it should be called Labáná, the name of a tribe of industrious Sikh colonists, is not clear.
Kankúil. Centipede.
Popat. Butterfly.

Bees, here called mákhi, produce good honey (mákhi) in September and October.

Communications. Roads.

36. There are 12 miles of metalled and 524 of unmetalled roads in the district. The metalled roads are immediately near Muzaffargarh. The unmetalled roads are as follow:—

1. The road from the southern boundary of the Jhang District running parallel with the Chenab through Rangpúr, Muzaffargarh, Khángarh, Shahr Sultan, Alípur, Sítpur, and Dháká to the ferry on the bank of the Indus opposite Rájanpur in Dera Gházi Khan.

2. The old customs road from the Leiah boundary running parallel with the Indus through Daira Dín Panáh, Kot Adú, Sanánwán, Gujrat, Kureshí, and Kinjar. To complete this road parallel with the whole length of the district, a road from Kinjar to Dháká is urgently required.

3. The road from the bank of the Chenab at Rangpúr through Munda and the Thal to Dáira Dín Panáh.

4. The road from the bank of the Chenab opposite Mooltan through Langar Sarai Bukhi which joins the old customs road at Kot Adú.

5. The road from Muzaffargarh through Mahmud Kot to Sanánwán with a branch from Mahmud Kot through Gujrát to the Kureshí ferry.

6. The road from the terminus of the Lahore Railway at the Shershah ferry through Muzaffargarh and Kureshí to the ferry opposite Dera Gházi Khan.

7. The road from Muzaffargarh through Shahgarh to Kinjar.

8. The road from the bank of the Chenab opposite Shujabád through Khángárh and Kinjar to the bank of the Indus.

9. The road from the centre of No. 8 between Khángárh and Kinjar through Muhammadpur to the bank of the Chenab near Chitwáhán. This was part of the old customs road.

10. The road from Rohillánwáli to Jatoí.

11. The road from Shahr Sultan to Jatoí.

12. The road from Madwala on the bank of the Chenab to Jatoí. This was an earlier customs road.

13. The road from Alípur to Sítpur *viâ* Khairpur.

14. The road from Jatoí to Alípur.

Ferries.

37. There are 21 ferries on the Indus, all of which are under the control of the Deputy Commissioner of Dera Gházi Khan. There are 28 ferries on the Chenab. From the north-east corner of the district to Shershah, which is the terminus of the Sindh, Punjab and Delhi Railway, 7 ferries are under the control of the Deputy Commissioner, Mooltan. The Shershah ferry and 20 others down to the junction of the Chenab with the Indus are under the control of the Deputy Commissioner, Muzaffargarh.

Bridges.

38. There are no bridges over either river. The inland bridging is over the canals, and is on the whole complete. A few bridges are still wanting on the road from Sanánwán to Kinjar, and when the much required road is made from Kinjar to Jatoí, several bridges will have to be made.

Rest-houses and Sarais.

39. The district is well supplied with rest-houses. There are dâk bungalows at Muzaffargarh and Kureshí, and rest-houses at the following places:—

Rangpúr.	Khángárh.
Sáiuti.	Kínjar.
Langar Sarái.	Rohillánwáli.
Mundá.	Shahr Sultán.
Daíra Dín Panáh.	Jatoí.
Kot Adú.	Alípur.
Sanánwán.	Sítpur.
Mahmúd Kot.	Dháká.
Kureshí.	

A new rest-house is being made at Muhammadpur half-way between Khángárh and Rohillánwáli.

Sarais.

40. There are Sarais at the following places:—

Muzaffargarh
Kureshí
Sanánwán
Khángárh
Alípur
Bukhí
Mírwálá

Towns.

41. The towns are small and unimportant, with the exception of Sítpur. They are all modern. The following are the principal:—

Name.	*Population.*
Daira Din Panah	... 1,792 *
Kot Adú	... 5,552 *
Mahmúd Kot	... 2,223 *
Gujrát	... 1,585 *
Rangpúr	... 1,439 *

NOTE.—* This includes a large rural population.

Muzaffargarh	...	2,596
Khángárh	...	2,778
Kúnjar	...	4,719 *
Shahr Sultán	...	1,947
Jatoí	...	1,914
Alípur	...	2,525
Khairpur	...	2,589
Sítpur	...	1,798

Sanánwán, the head-quarters of the tahsíl of that name, is merely a small village.

CHAPTER II.—HISTORY.

Introductory.

1. The Muzaffargarh District as a whole had no complete history until it was united under the sole rule of Diwán Sáwan Mal. The history of the neighbouring governments is, however, interesting, because it is by it alone that we learn the origin of the tribes now living in the district, and the order in which they occupied it. The contemporary history will, therefore, be given as briefly as possible, more for the sake of ready reference when the tribes are described, than in order to record events which had their central interest in this district.

The Hindu dynasties.

2. From the earliest times this district followed the fortunes of the kingdom of Sindh. The Hindu dynasties of the Rais and of the Brahmans ruled over a Jat population who are a branch of the Kshatriya or Rájput race, and, for some reason not known, had been excluded from fellowship. These Rájputs, who may be called aboriginal, are the ancestors of the Jats who form two-thirds of the present population, and all the other tribes are subsequent arrivals.

The Arab conquerors.
The Sumrás.
The Summás.

3. The first Arab conquerors held Sindh and Mooltan from 711 A. D. to 750 A. D., when they were expelled by a Rájput tribe called Sumrá, whose representatives are still found in this district. In 1351 A. D. the Sumrás were expelled by the Summás, another Rájput tribe, descendants of whom are to be traced among the Unars of the Alípur Tahsíl. The Summá rulers all bore the title of Jám. To this day jám is used as a title of respect to Muhammadans who have a Sindhian origin. It was during the rule of these Rájput tribes in Sindh and Mooltan, that an immigration of Rájputs from Hindustan took place. It is to this that we owe the presence in the district of such tribes as the Siáls, Guráhás, Bhattís, and Chhajrás.

NOTE.—* This includes a large rural population.

The Langá dynasty of Mooltan.

4. The next event bearing on the history of this district is the establishment of the Langá dynasty in Mooltan. It ruled from 1445 A. D. to 1526 A. D. There are still Langás in this district, and it was during the Langá rule that the independent kingdom of Sítpur was established by the Nahars in what is now the Alípur Tahsíl. It was during this dynasty that the Bilúches first emerged from the Sulemán mountains and occupied the country on the left bank of the Indus.

Division of the district into four Governments.

5. The establishment of the independent kingdom of Sítpur is the starting-point of a connected history of the district. Henceforward the district is occupied by four governments. In the southern angle will be found the government of Sítpur held first by the Nahar family, then by the Makhdúm of Sítpur, and lastly by the Nawábs of Baháwalpur. The west, central part of the district opposite Dera Gházi Khan, was governed by the rulers of Dera Gházi Khan, first, Mirháni Biluches, then Gujars and Kalhoras, then by various governors directly appointed by the Durani kings of Kabul, and finally by the Nawábs of Baháwalpur. The east, central, and northern part of the district lying on the right bank of the Chenab opposite Mooltan was nominally ruled by the Mooltan governors. The northern part of the district including the Thal, after passing through a stage of anarchy, became subject to the Governors of Mankera who were locally known as Nawábs of the Thal.

The first government in Sítpur.

6. The dynasty that established the Sítpur kingdom was the Nahar. In 1450 A. D. (854 A. H.) when Behlúl Khán Lodi who had been governor of Mooltan became king of Delhi, he granted the country lying between the Indus * and the Sulemán range, south of a line drawn from Harand to Uchh and north of Shikarpur in Sindh, to his relation Islám Khán Lodi. This tract comprised what is now the south part of the Alípur Tahsíl of this district, the southern part of Dera Gházi Khan District, and the northern part of Sindh. Islám Khán or his descendants took the title of Nahar. Islám Khán's grandsons, Kásim Khán, Salám Khán, and Tahir Khán quarrelled and divided the country among themselves. The south part of the present Alípur Tahsíl, the chief town of which was then Sítpur, fell to Tahir Khán. He established his rule there and died. From the establishment of the Nahar family to the present, 26 generations have occurred. The last of them is Bakhshan Khán, who is jamadar of chaprasís in the Alípur Tahsíl, and who enjoys a small allowance from Government for looking after the family tombs. One of the Nahars built a fine tomb in his lifetime which still exists. His name was Tahir Khán, named Sakhi, or the liberal. Another, named Alí Khán, founded Alípur. No other memorial of the Nahars exists. At the end of the fifteenth century the Bilúches began to issue from the hills, and occupied the country on the left bank of the Indus, from Sítpur to Kot Karor in Leia. In 1484 A. D. (887 A. H.) Haji Khán, a Mirhani Bilúch, founded Dera Gházi Khan and established a

* NOTE.—It must be remembered that at this time the Indus met the Chenab near Uchh.

dynasty, the rulers of which alternately bore the titles of Háji Khán and Gházi Khán.* These chiefs expelled the Nahar from the south of the Dera Gházi Khan District and pressed the Sítpur Nahar very hard. Treachery was at work at the very door of the Nahar. Sheikh Rájú, Makhdúm of Sítpur, who was a counsellor of the Nahar, began to seize the country for himself. He did not entirely expel the Nahars, for when he in his turn was overthrown by the Nawábs of Baháwalpur, parts of the country were still in possession of the Nahar. The greater part, however, of the south of the district was governed by the Makhdúms in Sítpur. Until the inroads of Baháwalpur began, we hear nothing of the Nahar or of the Makhdúm's government. The Nahars appear to have been indifferent rulers. They left no public works behind them, except Tahir Khán's tomb, and in this rainless and flooded country it is the criterion of a good governor that he should make canals and protective embankments. The title of Nahar was given to them for their rapacity. Popular stories attest their want of wisdom. One winter's night the jackals were howling round Sítpur. Tahir Khán "the liberal" asked his Wazír what made them howl. The Wazír answered "the cold." The Nahar ordered clothes to be made for them. Next night the jackals howled again, and the Nahar asked his Wazír what they were howling for. The Wazír replied "they are invoking blessings on you for your liberality." The Makhdúms of Sítpur, on the contrary, were good governors. They dug canals, extended cultivation, and one of them founded the town of Rájanpur in the Dera Gházi Khan District.

The Nawábs of Baháwalpur take Sítpur.

7. The divided and weakened state of Sítpur attracted the attention of the Nawábs of Baháwalpur first at the beginning of the eighteenth century. They ruled over the greater part of the district for a hundred years, and left their mark on it by their public works, and by introducing an organised revenue administration. The founder of the State of Baháwalpur was Sadik Muhammad Khán, son of Mullan Mubarak Khán, a distinguished resident of Shikarpur in Sindh. For some reason not ascertained, Sadik Muhammad Khán had to flee from the enmity of Nur Muhammad Kalhora, first of the Kalhora governors of Sindh. Sadik Muhammad Khán left Shikarpur in 1727 A. D. (1140 A. H.) and passed with his family and a body of followers through the Muzaffargarh District to Bet Dabli on the borders of Leiah. He was closely followed by the Sindh troops under Mir Shah Dad Khán. A skirmish took place, in which the Sindhians were defeated. Then Sadik Muhammad Khán took refuge with the Makhdúms of Uchh, who sent him to Hayat Ullah Khán, Governor of Mooltan, with their recommendations. Hayat Ullah Khán granted him the district of Chowdhry south of the Sutlej in jagir. Sadik Muhammad Khán distinguished himself as an extender of cultivation, and a suppressor of robbers. His next promotion was the grant of the town and country of Farid, a robber chief whom he defeated and killed with his followers. In 1739 A.D. (1152 A.H.) Sadik Muhammad Khán obtained the title of Nawáb from Nadir Shah, and in the anarchy following the invasion of

* NOTE.—The village in which Dera Gházi Khan stands is hence known as Haji Gházi.

Nadir Shah, he succeeded in seizing the country bounded by the Sutlej on the north, Bikanír on the east, Sindh on the south, and the Indus on the west. Sadik Muhammad Khán was succeeded by his son Baháwal Khán, who founded the town of Baháwalpur, and who is known as Baháwal Khán "the great." It was in the time of his successor, Mubarak Khán, that the Nawábs of Baháwalpur first established themselves permanently in this district. In 1751 A. D. (1164 A. H.) Mubarak Khán seized the country about Madwala, now a large village on the right bank of the Chenab between Shahr Sultan and Alípur, just opposite the junction of the Sutlej and Chenab, from the Nahars, and in the same years he took Bet Doma, a village and tract south of Sítpur, from Makhdúm Sheikh Rájú of Sítpur. Baháwal Khán II was the next Nawáb. In 1781 A. D. (1194 A. H.) he took the parganah of Jatoí from Makhdúm Sheikh Rájú of Sítpur. The native histories say that he took it on farm, but this is hardly credible. The Nawáb was the most powerful, and the Makhdúms were growing every day weaker. The Nawáb had already taken part of the Makhdúms' country by force and was shortly to take the rest. It was about 1790 that the Indus left its old course which joined the Chenab close to Uchh, and took the bed it now occupies. The south of the district was thus laid open to the attacks of Baháwalpur, and the Nawáb at once availed himself of the opportunity. He took without a contest Alípur, Shahr Sultan, Sítpur, and Khairpur, in short the remainder of the Alípur Tahsíl from the Nahars and the Makhdúms of Sítpur. He also proceeded to take the whole of the western and southern portion of the Muzaffargarh Tahsíl from the rulers of Dera Gházi Khan, but we will leave him in possession of the Alípur Tahsíl for the present, and give an account of the remaining governments that existed in this district.

The second Government, Dera Gházi Khan.

8. It has already been stated that the Bilúches occupied the left bank of the Indus at the end of the fifteenth century, and that in 1484 A. D. Haji Khán founded Dera Gházi Khan. His son was Gházi Khán, and alternate Háji Kháns and Gházi Kháns ruled until 1769 A. D. (1183 A. H.) As far as this district knows them, they were good governors. They encouraged agriculture and excavated canals. One of them, said to be the first Gházi Khán, founded the town of Kínjar on the bank of the Indus. Mahmúd Gújar was the son of one Yusaf. He became Wazír to the last Gházi Khán, and, under the pretext of saving the government from conspirators, called in Ghulam Shah Kalhora, Governor of Sindh, who took Dera Gházi Khan, arrested the last Gházi Khán, and carried him a prisoner to Sindh, where he died. Ghulam Shah left Mahmúd Gújar as Governor of Dera Gházi Khan. He was maintained by the kings of Khurasan and received from them Nawábship and the title of Ján Nisár Khán. Mahmúd Gújar ruled for 30 years, and was succeeded by his nephew Barkhurdar, who was superseded by governors sent direct from Khurasan. Mahmúd Gújar has a great reputation as a good governor in this district. He bought much land which Government owns to this day. He built the fort of Mahmúd Kot. The Shía Muhammadans in this district date from the time of the Kalhora invasion caused by Mahmúd Gújar. After the

Gújars, a number of governors were sent direct from Khurasán. Anarchy prevailed on the left bank of the Indus, which prepared the country for the invasion of Baháwal Khán II in 1791. Here we may leave the Dera Gházi Khan part of Muzaffargarh at the same point where we left Sítpur, and give an account of the part of the district that was subject to Mooltan.

The third Government. Mooltan.

9. The Langás referred to in para. 4 were expelled in 1526 A. D. by the Arghúns nominally acting on behalf of Baber, and in Akbar's reign, Mooltan was incorporated in the Delhi empire as a Súbah or province. Of the sub-divisions of the Mooltan province, the only two mentioned in the Ain Akbari are Rangpúr and Sítpur. Though we know from general history that this district must have been sometimes subject to Delhi and sometimes to Khurasán, neither monarchy had much effect on its internal history, and the local chiefs carried on their public improvements and their little wars without interference from head-quarters. Occasionally, one of two rival competitors tried to strengthen his cause by obtaining a deed of grant from Delhi or Kabul. But a strong band of followers proved a better support than any sanád or firmán. A favorite saying of the local historians in describing the rise of some chief who, if a settled government had existed, would have been hung, is—

Udhar Dilhí dí Saltanat men fatúr ;
Idhar Sháhán Kábul ke nazaron se dúr.
On that side anarchy in the Delhi kingdom ;
On this side far from the eyes of the Kings of Kabul.

I have, therefore, as far as possible avoided all notice of the nominally central governments and only mentioned extraneous history as far as it bears on the district. On this principle, Mooltan has no history connected with the district from the time of the Langás to the establishment of the Mooltaní Pathán, as they were called. These were a family of Saddozai Afghans and a branch of the family to which Ahmad Shah, Taimúr Shah, Zamán Shah, and Shah Shujah, kings of Kabul, belonged. The first of the family who came to India was Husain Khán, who held Rangpúr in this district in jagir in the time of Aurangzéb. Záhid Khán was the first of the family who became Nawáb of Mooltan. This was in 1738 A. D. Between the accession of Záhid Khán and that of his son Shuja Khán, simple anarchy prevailed. Shuja Khán was invested with the government of Mooltan in 1767 A. D. He founded Shujabad in the Mooltan District opposite Khángarh. In his time the Bhangi Sikhs overran the country and occupied Mooltan, driving Shuja Khán to Shujabad. To this day the raids and cruelty of the Bhangi Sikhs live in the memory of the peasants living along the right bank of the Chenab. Shuja Khán was succeeded by his son Muzaffar Khán, but did not recover Mooltan till 1779 A. D., when he was reinstated by Taimúr Shah, king of Kabul, who expelled the Sikhs and appointed Muzaffar Khán, governor, with the title of Nawáb. Muzaffar Khán governed Mooltan till 1818 A. D., when Mooltan was besieged and taken by the Sikhs, and the Nawáb with five of his sons was killed. Muzaffar Khán's rule

was a continued war. It is, however, only as a civil governor that we have to do with him, and it is surprising that he should have found time for making such improvements in the country on the right bank of the Chenab. The country in this district attached to Mooltan, included the talukas of Rangpúr, Murádábád, Muzaffargarh, Khángarh and Ghazanfargarh. Muzaffar Khán dug canals, made embankments and extended cultivation. He established many persons of his own tribe in this part, a fact to be remembered when we come to relate the tenure of the Mooltaní Patháns. In 1794 A. D. he founded the fort and town of Muzaffargarh. His sister Khan Bíbí built the fort and town of Khángarh, and his brother Ghazanfar Khán, the fort and town of Ghazanfargarh.

The fourth Government. The Thal Nawábs.

10. The governors that occupied the north of the district including the greater part of what is now the Sanánwán Tahsíl, were first Mirhání Bilúches. Adu Khán, a son of one of the Gházi Kháns, is said to have founded Kot Adú. When the fortunes of the Gházi Kháns became low, Mahmúd Gújar succeeded as before related and built the fort of Mahmúd Kot to maintain his authority in the Gházi Khán tracts on the left bank of the Indus. Next, a family of Jaskání Bilúches ruled the north of the district. Then follows an interval during which the Kalhoras of Sindh ruled, their Chief being Abdul Nabbí. He became unpopular on account of his tyranny, and objectionable to the Kabul king because he did not pay the revenue. Muzaffar Khán, Nawáb of Mooltan, was sent to coerce him. Muhammad Khán Bahádar Khel officiated for Muzaffar Khán at Mooltan, and on his return was appointed Nawáb of Mankera and the Thal. Before he obtained possession he had to fight a battle with Abdul Nabbí at Leiah, in which the latter was defeated and his son Muhammad Arif killed. This was in 1792 A. D. Muhammad Khán Bahádar Khel has left his mark on the north of the district by the canals which he dug. He appears to have been a good ruler, and, though his name is forgotten, it is he that is referred to as the Nawáb of the Thal. He died in 1815 A. D., leaving a daughter who was married to Háfiz Ahmad Khán. Their son, Sher Muhammad Khán, succeeded to the Nawábship under the guardianship of his father. In 1820 Ranjit Singh took Mankera and drove the Nawáb to Dera Ismail Khán, of which his descendant is now titular Nawáb. The country under the Thal Nawábs was known as Kachhí Shamálí, opposed to Kachhí Janúbí, which was Baháwal Khán's dominion. That the word Kachhí, which means land subject to river-action, should ever have been applied to the Thal, strongly corroborates the tradition that the Indus at one time flowed down the Thal mentioned in the chapter on physical geography. At present it is hard to imagine anything less like a Kachhí than the Thal is.

Union of the four Governments.

11. We have now brought our four governments to the point where they begin to fall and to become united under one head. The process was completed in the thirty years between 1790 and 1820 A. D. We left Baháwal Khán II, with the district lying open to him by the shifting of the Indus to the west and having just seized those

talukas which now form the Alípur Tahsíl. In the part of the district which had been ruled from Dera Gházi Khán there prevailed the anarchy which followed the rule of Mahmúd Gújar. Between 1790 A. D. and the end of the century Bahâwal Khán II took possession of the talukas of Aráín Kínjar, Khor, Mahrá, Seri and Trund, which now form the southern and western part of the Muzaffargarh Tahsíl. This country and the Alípur Tahsíl were called Kachhí Janúbí, opposed to the Kachhí Shamálí of the Thal Nawábs. He and his successor, Sadik Khán II, and Bahâwal Khán III brought the country under a settled government, encouraged cultivation and excavated canals. The dates of their accessions and deaths are not on record until we come to Bahâwal Khán III, who was the governor that helped Edwardes at the siege of Mooltan. He died in 1852 A. D. In 1818 A. D. the Sikhs took Mooltan, and the talukas formerly governed by Muzaffar Khán, *viz.*, Rangpúr, Murádábád, Muzaffargarh, Khángarh and Ghazanfargarh, were henceforward administered by the Sikh governors of Mooltan. In 1819 the Sikhs took Dera Gházi Khán, but Bahâwal Khán remained in possession of his conquests. In 1820 the Sikhs took Mankera, from which the north of this district was governed. Bahâwal Khán submitted to the Sikhs, and thus the whole district became united under the rule of Ranjit Singh. A re-distribution then took place. Bahâwal Khán was confirmed in his conquests, which were farmed to him for a sum, the amount of which, as every historian, native and European, gives it differently, had better be omitted. The northern part of the district continued to be governed from Mankera, and Muzaffar Khán's talukas were governed from Mooltan. The Mooltaní Patháns fled the country, and went for the most part to Dera Ismail Khán, not to return until the English came in 1849 A. D. In 1822 the celebrated Sáwan Mal, who was peshkar to the governor of Mooltan, Bhaya Badan Hazari, fell out with his superior officer, and the talukas of Muzaffargarh, Murádábád and Ghazanfargarh were given to him by Ranjit Singh in farm. Bahâwal Khán failed to pay the sum for which his country was farmed to him. General Ventura was sent from Lahore with an army, and drove the Bahâwalpurians out of the district and across the Chenab, which has since formed the boundary between this district and Bahâwalpur. How the north of the district joined Mooltan I cannot find out; but in 1829 the whole of the present district of Muzaffargarh was united under Diwán Sáwan Mal, governor of Mooltan.

The united Government under Sáwan Mal.

12. Though under the Bahâwalpur Nawábs part of the district has enjoyed a fairly settled administration, Sáwan Mal's government was better than anything that had preceded it. Its sole object was the accumulation of wealth for the Diwán. The execution of public works, the administration of justice and security of life and property, were a secondary consideration, and were insisted on only because without them agriculture would not prosper, and the revenue would not be paid. When one examines his numerous cesses and sees how he levied dues to pay the people's alms and perform their religious duties, and then paid the poor and the Brahmans what he thought a fair amount and pocketed the rest; how he levied a cess in return for keeping his

word, and how he encouraged his officials to take bribes and then made them duly credit the amount in the public accounts,—one's admiration for the great Diwán is less than it would be, if based on history. The district was divided into the 24 talukas mentioned in the margin and which are shown in the talukawár map accompanying this report. Each taluka was governed by a kárdár, a muharir, and a few soldiers. A better account of how the government was carried on cannot be given than by translating a specimen of the instructions given to a kárdár—

1. "Treat the subjects well. Work in extending cultivation. Collect the revenue with acuteness. Every harvest and every year let cultivation and the revenue increase.

2. "Protect the taluka effectually. Let not theft and wickedness occur. If a theft takes place, before all things cause restitution to be made to the complainant, search for the thief, imprison him, and after two months send the list of thieves to me for suitable orders of imprisonment or fine.

3. "Send the revenue punctually in the following instalments:

"*Kharif.* 1st instalment 15th Magar.
2nd instalment 15th Poh.
3rd instalment 15th Maugh.

"*Rabbi.* 1st instalment 15th Jeth.
2nd instalment 15th Harh.
3rd instalment 15th Sáwan.

4. "On Harh 1st, send a list of the current prices, signed by honorable panches and zamindárs.

5. "Every year in the month of Badra come to my office and settle your accounts.

6. "Settle cases of the hither and farther bank of the Ghárá by means of letters to the vakils stationed at Ahmadpúr and Baháwalpur, and to the kárdárs of that state, with politeness, and secure your object.

7. "Perform the clearance and excavation of the canals in time, that the irrigators may not have to wait, and that time may not pass.

8. "When you go to appraise or divide crops, or to assess revenue, make the papers of the muharir, dumbír and panch agree. Let there not be discrepancy.

9. "Act according to the before mentioned provisions of this áín. Let there be no difference from it. Subsist on your pay. Covet not from any one, and rest your hopes on no one, nor let your muharirs do so. If you do, you are strictly responsible.

10. "Pay the soldiers with your own hands according to the fixed scale, and deduct whatever deductions are due from them."

11. Here are entered the names and pay of the kárdár, muharir and other servants.

In spite of the warning against extortion, the kárdárs were allowed to receive nazaránás and subsistence allowance when they went on government duty, such as measuring crops. The subsistence was on the following scale; flour 3 séra, ghí ¼ sér, dal ¼ sér, gram for horse 3 séra, spices 1 anna. Nazaránás had to be paid in to government. There were five grades of kárdárs who received from Rs. 15 to Rs. 60 per month, and five grades of muharirs receiving from Rs. 8 to Rs. 20 per month. Soldiers were divided into the war and revenue departments. A sowar in the war department received Rs. 15 to Rs 20, and in the revenue department Rs. 12 a month. Foot soldiers in the war department received Rs. 7 and Rs. 6, and in the revenue department Rs. 3 and Rs. 5. There are few personal details of Sáwan Mal's government which relate to this district. How he excavated and improved canals has been already told. How he created or extended the tenure called chakdári will be described among the tenures, and his revenue system will be described in its proper place. During the rule of Sáwan Mal a large number of Labáná colonists from the Punjab settled here. There are now more Labánás in Muzaffargarh District than in the other districts of the Mooltan and Derajat Divisions put together.

Diwán Mulráj.

13. Sáwan Mal died on the 29th September 1844, and was succeeded by his son Mulráj, of whom nothing particular connected with this district is known. When Mulráj broke into rebellion, Lieutenant Edwardes' troops passed through this district from Kureshí ferry on the Indus across the Chenab, just before the battle of Kineyree. Before Edwardes marched through this district, while Mulráj's troops under Har Bhagwán Singh occupied Dairá Dín Panah, Kot Adú and Kureshí, the zamindárs of Jatoí had robbed Parabh Diál, the kárdár of Jatoí, and made him over to the servants of the Nawáb of Baháwalpur. A force of 200 men under Jowáhir Mal, Eminabádí, was sent from Kureshí to punish the people of Jatoí. The Baháwalpur troops, 1,500 in number under Muizuddin Khán Khákwani, crossed the Chenab and met Jowáhir Mal at Alípur. Jowáhir Mal, seeing himself outnumbered, fled. The Baháwalpur troops killed a hundred of his soldiers and pursued Jowáhir Mal nearly to Khángarh, where he found a refuge.

The district under British rule.

14. In April or May 1849 the British districts of Khángarh and Leiah were formed. Khángarh contained the present tahsíls of Muzaffargarh, and Alípur, and the talukas of Garh Maharájá and Ahmadpur, which are now in Jhang. Khángarh was first named as the head-quarters of the district, but before the end of 1849 it was removed to Muzaffargarh. Khángarh contained four tahsíls—Rangpúr, Khángarh with its head-quarters at Muzaffargarh, Kinjar and Sítpur. What is now the Sanánwán Tahsíl was in the Leiah District, and had its head-quarters at Kot Adú. In 1859 the Sanánwán Tahsíl was separated from Leiah and added to this district, and the district took the name of Muzaffargarh and was attached to the Mooltan Division. It was in 1861 that the district took its present shape. The Rangpúr Tahsíl was abolished. The talukas of Garh Maharájá and Ahmadpur were joined

to Jhang, and the rest of the tahsíl was attached to Muzaffargarh Tahsíl. The Kinjar Tahsíl was abolished and its talukas added to Muzaffargarh. With the exception of these territorial transfers, the district has no events of interest other than those connected with ordinary district management since annexation. In 1857 a body of mutineers from Mooltan were defeated by the zamindárs under Allah Dad Khán of Khángarh, but the mutiny left no other sign. The Deputy Commissioner reported that there was not a single mutineer in Muzaffargarh Jail when the amnesty was proclaimed, and that no buildings were destroyed during the mutiny. Of the famine of 1861 the Deputy Commissioner writes: "Fortunately did not reach here," but numberless people flocked here from Hindustan in search of food, and famine works had to be started. The only colonists who were introduced during British rule were the Mooltaní Páthán who returned and partly recovered the lands from which they had been expelled in 1818 A. D. by the Sikhs. The following is a list of the Deputy Commissioners who have administered the district since annexation :—

Years.	Names of Deputy Commissioners.	Date of charge.	
		Received.	Made over.
1849	Mr. Wedderburn		
	Mr. J. H. Prinsep		
	Lieut. James		
1850-57	Lieut. Farrington		
	Capt. Voyle		
	Lieut. McNeile		
	Lieut. Tighe		
	Capt. Bristow		
1858	Mr. Henderson		
1859	Capt. Bristow		
	Capt. Maxwell		
1860	Lieut. Tighe		
1861	Capt. J. S. Tighe	1st Jan. '61	31st July '61
	Capt. T. F. Forster	1st Aug. '61	31st Oct. '61
1862	Capt. J. S. Tighe	1st Nov. '61	31st July '62
1862-65	Capt. H. J. Hawes	1st Aug. '62	24th Oct. '65
	Mr. R. G. Melvill	25th Oct. '65	24th Dec. '65
1866	Major H. J. Hawes	25th Dec. '65	8th Apl. '66
	Capt. R. G. Melvill	9th Apl. '66	16th Dec. '66
1867-68	Major H. J. Hawes	17th Dec. '66	2nd May '68
	Capt. Armstrong	3rd May '68	14th June '68
1869	Capt. J. Fendall	15th June '68	30th Apl. '69
	Mr. G. E. Wakefield	1st May '69	31st Oct. '69
1870	Capt. J. Fendall	1st Nov. '69	28th July '70
	Mr. M. Macauliffe	29th July '70	7th Sept. '70
1871	Capt. J. Fendall	8th Sept. '70	27th May '71
	Capt. F. J. Miller	28th May '71	9th June '71
1872	Mr. F. D. Bullock	10th June '71	9th Feb. '72
	Lieut. F. J. Miller	10th Feb. '72	22nd Mar. '72
1873-75	Mr. J. D. Tremlette	23rd Mar. '72	16th Aug. '75
1875	Mr. F. E. Moore	17th Aug. '75	5th Nov. '75
1876	Mr. J. D. Tremlette	6th Nov. '75	3rd June '76
	Mr. D. B. Sinclair	4th June '76	3rd July '76
1877	Mr. J. D. Tremlette	4th July '76	8th Mar. '77
1878	Major F. D. Harrington	9th Mar. '77	8th Dec. '78
1879	Mr. M. Macauliffe	9th Dec. '78	9th May '79
	Mr. Edward O'Brien	10th May '79	26th Oct. '79
1880	Mr. M. Macauliffe	27th Oct. '79	7th Mar. '80
	Mr. Edward O'Brien	8th Mar. '80	

CHAPTER III.—POPULATION, HOUSES, FOOD AND CLOTHING.

Population, with accounts of the chief tribes.

1. According to the census of 1868 the population was 295,547. As regards density of population the district ranked twenty-second out of the thirty-two districts of the Punjab, having ninety-eight persons to the square mile. Grouped according to religion, the population consisted of—

Christians	...	30
Muhammadans	...	249,865
Hindus	...	36,746
Sikhs	...	2,571
Budhists and Jains	...	2
Others	...	6,333

The chief tribes and their numbers were as follows:—

Muhammadans.

Jats	...	158,952
Bilúches	...	41,737
Rájputs	...	78,330
Syads	...	7,180
Patháns	...	1,868
Others	...	32,396

Hindus and Sikhs.

Aroras	...	31,309
Labanas	...	2,476
Brahmans	...	1,360
Khatris	...	843
Others	...	3,330

Jats.

2. In this district the word Jat includes that congeries of Muhammadan tribes which are not Syads, Bilúches, Patháns and Kureshís. According to this definition Jats would include Rájputs. This I believe is correct. The Jats have always been recruited from the Rájputs. There is not a Jat in the district who has any knowledge, real or fancied, of his ancestors that would not say that he was once a Rájput. Certain Jat tribes as the Panwár, Parihár, Chhajrá, Dahá, Gurahá, Bhattí, Massan, Bhuttá, Sahú, Siál, Jánglá, and others have names and traditions which seem to connect them more closely with Hindustan. Some bear the Rájput title of Rai, and others, as the Saigals and Khairás, though Muhammadans, associate a Brahman with the Mullán at marriage ceremonies, while the Panwárs, Parihárs, Bhattis, Joiyás, and others bear the names of well-known tribes of Rájputáná. The fact is that it is impossible to define between Jats and Mussalman Rájputs. And the difficulty is rendered greater by the word Jat, also meaning an agriculturist, irrespective of his race and Jatáki agriculture. In conversation about agriculture I have been referred to a Syad Zaildár with the remark, "Ask Anwar Shah; he is a better Jat than we are."

The Jat tribes are exceedingly numerous. There are 165 in the Sanánwán Tahsíl alone. They have no large divisions embracing several small divisions. Nor do they trace their origin to a common stock. No tribe is pre-eminent in birth or caste. Generally Jats marry into their own tribe, but they have no hesitation in marrying into other tribes. They give their daughters freely to Bilúches in marriage. But the Bilúches say that they do not give their daughters to Jats. This is, however, a Bilúch story; many instances of Jats married to Bilúchnis could be named.

The best known Jat tribes are the following:—

On the right bank of the Chenab are settled the Khairás Siáls, with their branch the Surbánás, the Traggars, Thaíms and Chhajrás. In the Sánanwán Tahsíl are Parihárs, Panwárs, Gurâhás and Pattals. In the centre of the district are Metlas, Makwals, Bhuttas, Diwálás, Mahrás, and near Kínjar the Dhanotr and Jánglá tribes abound. On the bank of the Indus, and in the south of the district, the Bilúches become more numerous, and the majority of the Jats have a Sindhí origin shown by their bearing the title of Jám. Of these Sindhí Jats, are the Damar, Unár and Sarkí tribes. The leading men among the Jats are Jallá and Shajáwal of the Traggar tribe near Rangpúr, Sáhib Khán Siál, Muhammad Yár Thaím near Muzaffargarh, Ghulám Haidar Jánglá of Kínjar, Pír Muhammad and Umarvadá Chhajrás, Ahmad Yár Damar, Jam Massú Unar, Fázil Muhammad Panúhán, Ahmad Yár Hinjrá, Sálih Muhammad Parihár, and Mián Jivan Guraha.

The Bilúches.

3. The Bilúches differ little from the Jats with whom they have freely intermarried and mixed, and with whom they live. The tribes are numerous, but have no arrangement into Tumans and Phallis like the Bilúches on the frontier. No tribe is pre-eminent on account of descent. The only common bond is the name Bilúch. In the south of the district, the distinctive Bilúch dress of a smock-frock reaching to the heels may occasionally be seen, especially among the Drishaks, but as a rule a Bilúch cannot be distinguished from a Jat. In this district they cannot even boast that they excel in the standard Bilúch virtues of hospitality, want of industry, and robbery. Certain tribes, as the Surhánís, Ghazlánís, Gopángs and Chándias have the worst of characters, but they are no worse than the neighbouring Jats. None understand the Bilúch language. Bilúches are found generally throughout the district, but are more numerous on the bank of the Indus, and in the south. Their chief tribes are the Chándias, the Gurmánís (among whom Mián Mahbúb, Honorary Magistrate, is a leading man), the Gopángs, the Jatoís (among whom Kaurá Khán is the wealthiest), the Lagháris, Mastoís and Drishaks.

Syads.

4. The Syads are chiefly Bukháris and Gilánis. There are other less known divisions as the Husaini, Maúdudi and Shamsi. Historically, the best known is the Syad family of the Makhdúm of Sítpur, for sanctity Diwán Muhammad Ghous, the keeper of the shrine of Alampir at Shahr

Sultán. Both these are Bokhárí Syads. Muhammad Shah, guardian of the shrine of Pír Amír in the village of Jálwála, is a Gíláni Syad. The tribe of Kaherí in the Sanánwán Tahsíl prefer to be Syads and call themselves Shah, but their claim is not generally admitted. They are very good cultivators, which gives a blow to their pretensions, for the Syads here are more noted for rapacity than industry. It should be mentioned here that the keepers of shrines, whether Syads, Kureshí or other tribes, are styled Makhdúm.

Pathans.

5. The Pathans came to this district, as already described, at the end of last and beginning of this century. Their present representatives are of the Alízai, Bábar, Tarín, Bádozai, Bámizai and Yúsafzai tribes. The members of the family of Nawáb Foujdar Khán, C. S. I., and Nawáb Hasan Khán, C. S. I., of the Alízai tribe are jagirdars and owners of Lálpúr in Muzaffargarh Tahsíl, but they live at Dera Ismail Khán. The Bábars own most land. Their chief representatives are Allah Dád Khán, Honorary Magistrate of Khángarh, Mahmúd Khán, and Ghulám Nabbí Khán of Khángan. The Tarins live in the Sanánwán Tahsíl at Kuháwar. The only Tarins of note are Lál Khán and his brother Shah Nawáz Khán. None of the other Patháns are remarkable.

Jhabels, Kihals, Mors.

6. Of the other Muhammadan tribes, the only ones worth mentioning are the Jhabels, Kihals, Mors and Kutánas. The Jhabels came originally from Sindh. They cannot tell how long ago, but it is remarkable that of all the tribes of the district they alone speak pure Sindhí. They are also addressed by the honorific title of Jám. They live mainly by fishing and gathering pabbans, but many have taken to agriculture. They are reckoned good Muhammadans. The Kihals and Mors are said to be one tribe. In the north of the district they are called Mor, eat crocodiles and tortoises, and no Muhammadan will associate with them. In the south they do not eat these reptiles, and are considered good Muhammadans. Kihals and Mors live by fishing, but some have taken to agriculture. They, as well as the Jhabels, are fond of cultivating samúká, a grain that is sown in the mud left by the retreating rivers. These tribes live separately in villages near the rivers called Miání, from Me, a fisherman. There is an old report in the Deputy Commissioner's office which says that these three tribes were cannibals, but modern observation does not confirm this.

Kutánás.

7. The tribe Kutáná are said to be Chúhrás converted to Islam. The derivation of the name Kutáná is not known. In vernacular it is spelt Kurtáná and pronounced Kutáná. They live by cutting reeds and grass, and by making thatched roofs, ropes, reed huts, and other reed-work. On account of their willingness, Kutánás are sought after as servants, and become chowkidars, village kotwáls, servants, and even cooks.

The Kureshí families.

8. The Kureshís, though numerically small, deserve notice on account of their sanctity and present influence and wealth. The Kureshí family, which now

owns land near Karím Dád Kureshí and Gujrát, say that they received their lands from a king of Delhi. Their ancestors were counsellors and servants of the Dera Gházi Khán and Baháwalpur Nawábs and of Sáwan Mal. Sheikh Haidar, Zaildár of Kureshí, is the present representative of the family. Another Kureshí family owns Thatah Kureshí and the neighbourhood on the bank of Chenab between Muzaffargarh and Khángarh. The present representatives are Muhammad Baksh, Zaildar, and Núr Muhammad. They own much land, and are well off. The Kureshís of Sheikh Umar in the Sánánwán Tahsíl are large landowners and rich. Their representatives are Ghulám Nabbí and Pír Baksh.

Hindu tribes.

9. Of the Hindus the Kirár tribe are the most remarkable. They also style themselves Aroras. They claim to have been Khshatrís who became outcasts during Pars Rám's persecution of the Khshatrís. The ancestors of the present Kiráns fled to Kirát Prustha. Kiráns are divided into three main tribes—

Uttarádhi.
Dakhaná.
Dahrá.

The Uttarádhis and Dakhanás say that they were so named because they fled from Pars Ram to the north and south respectively. The origin of the name Dahrá is not known. Each main tribe is divided into numerous sub-divisions, the nomenclature of which defies classification. A few sub-divisions such as the Mate and Gurúwárá are found in the three main tribes. In Alípur the Malotrá are found only in the Dakhaná and Dahrá tribes, and the Sachdev is found only in the Uttarádhí tribes. The Kantror is found only in the Uttarádhí. In three towns that I have examined the following was the result:—

In Kot Adú there were—

Uttarádhís	33	Sub-divisions.
Dakhanás	85	do.
Dahrás	None.	

In Kínjhar there were—

Uttarádhís	27	Sub-divisions.
Dakhanás	38	do.
Dahrás	13	do.

In Alípur there were—

Uttarádhís	27	Sub-divisions.
Dakhanás	75	do.
Dahrás	19	do.

The inquiry was incomplete, because it ought to have extended over a much larger number of towns. All it points to is that there are more sub-divisions of Dakhanás than of the other tribes in the district. The

sub-divisions of each tribe intermarry, but the tribes do not intermarry. Uttarádhí Cháolas will not marry Dakhaná Cháolas or Dahrá Cháolás and *vice versâ*. In religion they worship the Krishna incarnation, or the river, or both, and their legends point to a revival of Hinduism having taken place in these parts between three and four hundred years ago by spiritual guides named Shámjí and Láljí being sent from Bindrában to bring back the Hindus who had begun to err and to worship at Muhammadan shrines. In 1600 Sambat came Shámji from Bindrában. His guru gave him two idols and said: "The Hindus of the western country of the Sindh are ignorant of their religion. They have no guru to guide them between good and bad. Go to the west and teach the Hindus the ceremonies of their religion; make them your disciples (Sevak). Your words will have speedy effect. Remain not in the pursuit of worldly affairs." When Shámjí reached the Sindh, he made two and-a-half disciples, *viz.*, two Khatris and half a Chandia Bilúch! He established a mandar at Dera Gházi Khán, and there are now mandars of Shámjí at Dera Ismail Khán, Kot Sultan, Kot Adú, and Mooltan. Láljí was a worshipper of Krishna who sent him on an errand similar to Shámjí. He first declined to go. Krishna gave him an idol of himself and told him to start for the Indus, and that Láljí would know it was following by the tinkle of the jhanjars on the idol's feet. When Láljí reached the country west of Dera Gházi Khán he stopped and looked round. The idol said: "You have stopped, I am going no further." Láljí stopped and built a mandar to Krishna by the name of Sri Gopináthjí, which exists to this day. Other Láljí shrines are at Dera Ismail Khán called Sri Nágarjí and at Baháwalpur called Sri Girdhárijí.

Sánwal Sháhí.

Another large body of sectaries are the Sánwal Sháhís. In 1545 Sambat, Gurú Nának took a journey into the Sindh country and found the Kirárs ignorant of religion and without a guru. He appointed a guru to teach them. Sánwal Sháh was the name of Nának's servant, and the gurus that followed were called Nának Sháhí. The gurus of the Sánwal Sháh sect are called Sánwal Sháh potras.

River worshippers.

The last sect of Kirárs are the worshippers of the river under the name of Jindpír. The Thákar Kirárs are the gurus of the river worshippers. This worship is most prevalent in the Alípur Tahsíl. On Sundays the river worshippers go to a neighbouring canal or river to worship. They make a raft of reeds, place on it a chirágh made of flour which they light and allow to float away. It is a remarkable thing that the spiritual guides of these four sects have quite forced the Brahmans into the shade. In influence, wealth and intelligence the Shámjí dási Gusaíns, the Láljí Gusaíns, the Sánwal Sháh potras and the Thakars are far superior to the local Brahmans and receive much more respect. Almost the whole of trade, money-lending and banking is in the hands of Kirárs. They have no prejudice against any kind of work and will sell vegetables or shoes, load donkeys, and do other work which an orthodox Hindu would refuse. They make very industrious cultivators.

In correspondence and accounts Kirárs use a peculiar character called Kiráki. They are not popular among the people. And a proverb says:

Kán Kirár kutte dá,
Visáh na kíje sute dá.

"Don't trust a crow, a Kirár or a dog even when asleep."

And a song is sung of their cowardice—

Chár chor,
Chaurási assán,
Hamlá kítá chor,
Drukiose assán;
Lánat chorán l
Shábás assán l

The robbers were four,
And we eighty-four.
The robbers attacked,
We ran away,
D—n the robbers l
Well done we l

Still they have all the merit of thrift and industry, and in spite of the proverb are generally trusted by their Muhammadan neighbours. The earlier Muhammadan rulers seem to have behaved with toleration to the Kirárs. The Hindu revival led by Shámjí, Láljí, and Sánwal Sháh took place while the Ghází Kháns were rulers. Latterly however they were very badly treated. They were allowed to ride on donkeys and were obliged to wear caps instead of turbans under certain circumstances. Unmentionable indignities were inflicted on them. In documents they are described as Mati-ul-Islám or subject to Islám.

Labánás.

10. The Labánás settled here during the rule of the Sikhs whose religion they still profess. Their chief occupation is rope-making. Some have become rich, and trade and lend money; a few have taken to agriculture and make industrious cultivators. At the census of 1868 there were more Labánás in this district than in the rest of the Mooltan and Deraját Divisions put together.

Brahmans.

11. The Brahmans are either Sarsúts or Pushkarnas. They are in a state of insignificance, socially as well as religiously. Generally ignorant, few have even knowledge enough to perform a Brahman's ritualistic duties. In suits between Brahmans turning on Hindu law or Brahminical custom, they invariably call Kirár witnesses to give evidence on the law.

None of the other Hindu tribes call for any notice.

Area of land owned by each tribe.

12. The following statement will show the area of land owned by each tribe:

Muhammadans.

			Acres.
Jats	...	...	852,259
Bilúches	...	...	341,504
Syads	...	...	107,990
Patháns	...	...	36,666
Others	...	...	113,907

Kirárs	...	...	200,226
Labánás	...	...	660
Brahmans	...	...	3,175
Others	...	...	13,347

Houses, food, and clothing.

13. The rural population are lodged in houses of three kinds. Each has its peculiar name. Kothá, a house with mud or brick walls, and a flat roof; sálh, a house with mud or grass walls and a thatched roof; garírá, an arched hut of grass. Garírás are most used in the inundated parts of the district. A very few of the wealthier agriculturists own a mári, *i. e.*, a masonry house of one or two storeys, and some have in the neighbourhood of their dwelling-house a courtyard with sheds, which answers the purpose of a guest-house and a place for meeting to transact business. Such a courtyard is called a visákh. The following description will apply to 99 out of 100 rustic homesteads. The dwelling-house is a sálh. In front of it is a small courtyard partly or entirely enclosed with a mud wall or a fence. Within this from a tree or from posts hangs the baby's cradle (pinghúrá) made of wood, reeds or a blanket slung hammockwise, and in the corner stands a branch of a tree, the thick end of which is fixed in the ground, and the smaller branches of which are cut down to stumps. The thick part is used to tie the churning apparatus to which churning is going on, and the milk vessels, after being cleaned, are hung on the stumps of the branches to dry and air. This is called a nahílá. Outside the courtyard is a larger enclosure in which cattle are tied, and a few stacks of fodder stand. Attached to the house, or at a little distance from it, is a cattle-shed called bháná or dhúín, where the cattle are housed during the winter. Inside the dwelling-house, which consists of a single room, is a large wooden platform, manhín, on which a mat of reeds is spread. On one corner of the manhín are various baskets holding cotton in various stages of preparation for spinning. In one basket called a tongar are the best clothes of the family. There are also two trays called patrota, one of which contains the small articles for women's use: looking-glass, tooth-stick, comb, needles and thread which a bride receives from her mother and which are called sanjá; the other contains the ornaments in daily use. At the other end of the manhín are the family bed clothes, and there the father, mother and children sleep at night. Grown-up sons and daughters are accommodated on charpoys. Under the manhín are kept the store of new earthenware vessels belonging to the house, the ghurat or hand-mill, and the mortar for husking called chatto and pestle mohlá. At the other end of the room is the fireplace at which meals are cooked, and near it two baskets, the larger of which contains the cooking vessels and dishes in daily use and the smaller the family store of spices. Near the walls are two or three earthen cylinders for holding grain, clothes, and odds-and-ends. The spinning wheel, spindle (urá),

winnowing basket, sieve, the ironstand for pots when cooking, and the cotton gin are hung on pegs driven into the walls. From the roof hang one or two strings of cord for keeping ghí or cold food safe from ants and cats. A net of large meshes called a trangar is also hung from the roof which holds clothes and blankets, and if the family owns a Kuran, it is kept in the trangar. A spare charpoy or two completes the furniture. Outside the house are one or more high platforms called manhán (Hindustani machán). On these the family sleep in the hot weather to be out of the way of mosquitos. In the flooded parts of the district the manháns are from ten to twelve feet high, and in heavy floods the people are compelled to spend day and night on the top for weeks together.

Food.

14. The people usually eat two meals a day, one at noon, the other at about eight at night. Besides these, an early meal is sometimes taken in the morning which is called nirán or hánjhal, literally "the heart sustainer," and another is taken in the afternoon called pichhaín. The staple food for all classes is cakes of wheat flour eaten with dál or greens. The other grains eaten are jawár, bájhra, rice, samúká and nángní. Meat is rarely eaten, except on festivals, or when an animal is killed to save it from dying a natural death or from disease. Fish is largely eaten. As already stated, dates form the staple food of the poor for months, and are much eaten by others during the season. Agriculturists drink whey (lassi) at the day meals and milk at night. As a rule, the men mess separately from the women. In some families, however, they mess together.

Clothing.

15. The ordinary clothing of an agriculturist consists of a plain turban, a scarf chádar of cotton cloth worn on the upper part of his body, and a loin cloth which is fastened round the waist the folds of which hang down like a petticoat. When active exertion is required, the folds are collected, passed between the legs and tucked into the waist at the back; this is called manjhlá, tahmad, or dedhá. A pair of shoes completes the working-day dress of the Jat. Shoes are described as ghetlídár if the upper leather be in one piece, or khannedár if it be in two pieces. The richer classes and the ordinary peasant on state occasions, instead of the working dress above described, wear a peaked cap (topí) with a colored turban wound over it. A dopatta of English cloth takes the place of the common chádar, and a silk lúngi or khés is added either as a scarf or wrapped round the waist; a cholá which is like a waistcoat with sleeves and skirts is worn, and in the place of the manjhlá, drawers made very full and baggy are worn, these are called shalwár, or if cut straight to the leg and tight, suthan. On the bank of the Indus and in the south of the district the long smock peculiar to the Bilúch is often seen on both men and women. Peasant women wear a scarf called bhochhan: it is called by different names according to its color; a boddice called cholí that looks as if it was made of patchwork: it is, however, a work of art, and each piece has its well-known name; a petticoat or drawers is

also worn—sometimes both are worn at the same time. In parts, especially in the north-east of the district near Rangpúr, instead of petticoat or drawers the women wear a manjhlá like the men. A pair of heelless shoes completes a Jatí's dress. The ornaments worn differ according to the wealth of the wearer. The following are always worn except by the very poorest women:—

Kángán	or	bracelet.
Náth	or	nose-ring.
Válián	or	earrings.
Chúrá	or	bracelet.

To be said to have the "ears of a cat," *i. e.*, without earrings, is a reproach hard to be borne by the ladies of the district. Women wear their hair in four ways according to their time of life. While they are small girls, the front hair is cut straight across the forehead, and the back hair is allowed to hang loose; the hair in this stage is called chhate. As a girl grows up, her hair is plaited on each side of the forehead; these plaits are called mendhián: and the unplaiting of them is a solemn ceremony which takes place at marriage. After marriage, the front hair hangs loose, and the back hair is plaited into a tail; the front hair is called "dharí" and the tail, "gut."

Chapter IV.—RELIGION, SHRINE, SUPERSTITIONS, AMUSEMENTS, LANGUAGE.

1. The religion of the Kiráṛs has been described in connection with the Hindu revival in these parts. The Jats, Bilúches, Syads, Patháns, and the miscellaneous tribes profess to be Sunni Muhammadans. There are a few Shias, remnants of the time when the Kalhoras ruled in Dera Gházi Khán and Mankera. The Syads and Patháns are the strictest Muhammadans, but even they are a good deal Hinduized. The Bilúches and Jats are very lax Muhammadans. The name of Allah and Muhammad are always on their lips, and some know their prayers and fast strictly. But their feelings of worship are entirely diverted from the Divine Being to their Pírs, for whom they have an excessive reverence. Every person has a Pír. It is not necessary that a Pír should be of known piety,—many, indeed, are notorious for their immorality. Nor is it essential that he should be learned. To obtain disciples all that is necessary is, that a Pír should have a character of being able to procure the objects of his disciple's vows. A common way of choosing a Pír is to write the names of the neighbouring Pírs on scraps of paper, and to throw the scraps into water. The saint whose scrap sinks first is selected. This mode of selection is called chithián ghatáwan. Each person secures the intercession of his Pír by an annual offering called buhal, which the Pír goes round and

collects himself or sends his deputies. They demand their buhal in the most shameless way, and even carry off things by force. If the disciples are slow in giving, the Pírs curse them, and pour filthy abuse on them. Besides this annual fee, the Pírs sell charms and amulets to obtain every object, and to avert every calamity, that can be imagined. It is no exaggeration to say that, with the large majority of the Muhammadan population, the Pírs have taken the place of Allah. The marriage ceremonies are largely borrowed from the Hindu ritual, and among some tribes a Brahman as well as a Mullán is in attendance. At harvests, the first charges on the crop are the fees of the Mullán, called rasúl arwáhí, and those of the Brahman called ganesh. Jats declare that they are ruled by the Shara Muhamdí, but they grudgingly allow a widow even a life tenure, and would give daughters no share at all in their fathers' estate. Pilgrimages to the shrines of saints are very common, and are made both as a religious duty and an amusement.

Shrines.

2. The shrines of this district are very numerous, and the more important are frequented by pilgrims from Dera Gházi Khán, Mooltan and Baháwalpur. It will be sufficient to give an account of the most famous, and merely to name the others.

Daira Dín Panah.

At the north-west corner of the district, in the town of the same name, is the shrine of Dín Panah. He was a Bukhárí Syad, who settled here three hundred years ago. He took up his abode in the house of Mussummát Suhágan, the wife of Ako, a jat of the Makwal tribe. When Suhágan's daughter was married, Dín Panah gave himself as part of the dowry. He died in A. H. 1012, on the west bank of the Indus, and was buried there. The Makwals of the east bank tried to steal his coffin, but were prevented. A feud broke out between the Makwals on each bank of the Indus. At last Dín Panah revealed himself in a dream to the brothers of Ako, and told them to make a coffin for the east bank of the Indus, and that his corpse would be found in it also, as well as on the west bank. Since then there has been a shrine on each bank of the Indus. The tomb is a fine domed building, covered with blue and white tiles. The Makwals are still keepers of the shrine, and are called Khádims. The present representative of the family is Murid Jáfir. Fairs are held here in Chetr and Sáwan, to which people come from Bakhar, Leiah, Mankera, and from this district. The offerings made are large, being estimated at Rs. 2,000 a year. At all times the tomb is a place of pilgrimage for Hindus as well as Muhammadans, and is a favorite shrine at which to cut off the jhand or first hair that grows on a child's head. Daira Dín Panah forms a refuge for an objectionable set of beggars. Any rascal, who is discontented at home, or prefers begging to work, wraps a brown pagri round his head, and, calling himself Sháh dá Fakír, considers himself entitled, under the authority of a traditional saying of Dín Panah, to beg within 14 kos of Daira Dín Panah. He requires no permission or institution from the keeper of the shrine, but makes raids on the

neighbourhood on his own account. These Sháh dá Fakírs travel about with bullocks and donkeys on which they load what they can get. They compel people by abuse and curses to give. They are disliked by the people, and have become such a nuisance that the Syads of Khai, an adjoining village, have taken to remove their crops at night in order to escape the fakírs' exactions.

Dáúd Jahánía.

3. Three miles south of Muzaffargarh, in the village of Rampúr, is the shrine of Dáúd Jahánía, called by the vulgar Dhadhú Jahánia or simply Dhadhú. It was founded by Sheikh Allahdád Kureshí, who came from Arabia and, having acquired sanctity in the service of Makhdúm Jahánía Jahán Gasht, settled at Rampúr. His descendants are Makhdúms of the shrine. They are now Metla jats. They say they became Metlas from Kureshís because so many Metlas live in the neighbourhood. Additions were made to the tomb by Nawáb Muzaffar Khán, and it was repaired by Diwán Sáwan Mal. The shrine is largely frequented by Hindus and Muhammadans. A fair is held there every Thursday, and in Chetr and Sáwan the assemblies are very large. A common vow at this shrine is called atá ghatá, literally "flour and sheep." When the object of the vow has been obtained, the devotee and his family repair to the shrine, taking a sheep and a maund or 20 sérs of flour. The head, skin and shoulders of the sheep they give to the Makhdúm, the rest is cooked, and the flour is made into bread and distributed to the poor. The offerings at this shrine have been farmed to a Kirár. The shrine has a celebrity for curing leprosy, and lepers from all parts of the Punjab and Kashmir resort to it, and persons who have obtained cures, present models of the diseased limb in silver and gold. Baths of hot and cold sand are prepared by the attendants of the shrine for lepers. Such baths are called rangin, the literal meaning of which is, the vessel in which dyers dye cloth. The charge for a rangin is Re. 1-4. Kádir Baksh Metlá is the present Makhdúm of Dáúd Jahánía.

Alam Pír.

4. At the town of Shahr Sultán is the shrine of Alam Pír. It was founded by Sheikh Alamuddin *alias* Alam Pír, a Bukhári Syad, descended from the Makhdúms of Uchh in Baháwalpur. In 1167 A. H. Shahr Sultán was carried away by the river. The shrine and the town were rebuilt at a distance of two miles from the old site, and remain to this day. This shrine is remarkable for the frenzy which attacks the persons, especially the women, that resort to it. In the month of Chetr a fair is held here on each of the Thursdays and Fridays, to which about 5,000 persons come from Dera Gházi Khan, Baháwalpur, Mooltan, and this district. As the women, most of whom are in kajáwas on camels, or riding on horses and bullocks, get near Shahr Sultán, they seem to take leave of their senses, and begin to sway the body violently from the waist upwards. Their hair gets loose. They screech, and look like so many bacchanals. In their excitement many fall off their camels on to the ground. The soil of Shahr Sultán is sandy, and they come to no harm. I saw a man, his wife, and baby come within sight of

Shahr Sultán at fair time. The woman and baby were riding on a bullock, which the husband was leading. The woman suddenly slipped off the bullock, put the baby into her husband's arms, and started screaming at the top of her voice across the plain that lay between them and Shahr Sultán, leaving the poor man standing on the road with the baby and bullock. This frenzy, which even attacks women at home as fair time draws near, is believed to be caused by the woman being possessed by a jin, and the term used for a woman so possessed is "jin khedan," to play jin. After having seen the performance, one may be pardoned for translating "jin khedan," "playing the devil." Within the fair, "playing the devil" and casting him out goes on in a regulated manner. In the house of the Makhdúm of the shrine and in the house of other Syads of the Makhdúm's family, women of the upper class have their attacks of jin, and have them cast out to the accompaniment of a Mirási woman playing on a drum and singing. For ordinary people, four sites are chosen, over each of which a Khalífá or deputy of the Makhdúm presides. The possessed women pay him a pice or a fowl, take their seats and begin to sway their bodies backwards and forwards, gradually increasing in violence. The excitement is kept up by a drum being played. The Khalífá goes round and lashes the women with a whip, and pours scented oil on them. As each woman gets weary, the Khalífá pronounces some words and sprinkles a little water over her. The jin is cast out. The woman becomes quiet, and is dragged away in an exhausted state by her friends. It is hard to imagine a more thoroughly repulsive exhibition. It is difficult to say how much of these attacks are assumed, and how much involuntary. The assaults of jins at home may certainly be set down as affected, the object being to make the husband take the wife to the fair. The frenzy on coming near the shrine seems involuntary. The paying of the Khalífá's fee is as deliberate an act as taking a railway ticket, but when a woman takes her seat with the swaying crowd she certainly loses all control over herself.

Other shrines.

5. The other shrines of note are—Baggá Sher, literally "white tiger," in the village of Khánpúr, 6 miles north of Muzaffargarh; it is so named because a white tiger defended the saint's cows from thieves. The shrine of Miran Hayát is in the village of Panj Giráin, seven miles south of Muzaffargarh; there is a stone figure of a camel on which the saint used to ride; there is a forest of date trees near the shrine the branches of which are said to be like cobras: a branch kept in a house will drive away cobras. The shrine of Dedhá Lál in the village of Harpallo is a fine domed building; this shrine, Baggá Sher, and Sheikh Laddú are efficacious for cattle to visit during an epidemic. The shrine of Mosan Shah in Jalwálá Pír Amír has a considerable celebrity, but has no remarkable buildings. In the Sanánwán Tahsíl are the shrines of Nur Sháh in the village of Talai Nur Sháh, of Sheikh Pallia and Háji Isháh, which have a certain local reputation. In Alípur there are no shrines worth mention, except Alam Pír, which has been already described. The favourite time for pilgrimages is Chetr, *i. e.*, from the middle of March to the middle of April, and Sáwan, *i. e.*,

from the middle of July to the middle of August. Sáwan is chosen because it is the date-picking month. Along every road dates are being gathered, dried, and taken away for sale. The pickers are allowed to give a handful to each passer-by. Thus pilgrims in Sáwan are almost freed from the necessity of taking provisions with them. I do not know why Chetr, the month before the harvest, should be chosen for pilgrimages.

Lingrí Pír, the Rag Saint.

6. In the Thal, far from any shrine, and on the roads leading to the noted shrines, may be seen occasional thorn trees, covered with rags similar to those near holy wells in Ireland. These are called the Lingrí Pírs, or Rag Saints. To account for its existence far from any shrine, it is said that it satisfied the want of women for a place of pilgrimage, and on the roads leading to shrines the rags are said to be placed as evidence that the vow has been performed. Pilgrims also tie knots in the grass of the roadside leading to a shrine, and a common form of making a vow is "if you grant me my desire (tedá gandh badhesán) I will tie a knot to you," that is, "I will visit your shrine."

Muhammadan ceremonies.

7. The ceremonies observed by the majority of the Muhammadan population, which consists of Jats and Bilúches, will now be described. Syads and Patháns have distinctive ceremonies which do not differ from those in use in other parts of the Punjab.

Ceremonies at births.

8. No particular rites are observed on the birth of a girl, which is considered a disaster. When a boy is born, a knife is buried upright in the ground near the head of the mat on which the mother lies (women are delivered lying on a mat on the ground, never on a bed). The knife is to keep away jins. The village Mullán is sent for, and in the child's right ear repeats the call to prayer, and in the left "Allahu akbar." Alms and food are distributed. Before the child is allowed to suck, a small quantity of sugar is placed in its mouth by a person of the family who is of well-known good character and disposition. Bilúches squeeze the liquor from asses' dung into the child's mouth, which is supposed to make it firm in battle. This administration is called ghutí. On the first, or at latest on the third, day after birth, the child is named, after consultation with the Pír and Mullán. Between the seventh and twenty-first, one or two goats are killed. The head, feet, entrails and bones are packed into the skin and buried. The flesh is cooked and divided among relations and the poor. The name of this ceremony is akíká.

Jhand laháwan.

9. The next ceremony in a child's life is the solemn cutting of its hair. A child's first hair is called jhand, and the act of cutting the hair off is jhand laháwan. Every child has its jhand cut off at the door of the village mosque. This is called vadhián dí jhand laháwan, "to cut off the hair according to ancestral custom." This ceremony is an occasion for

a gathering of friends, and for a feast. But, before the child was born, the parents have made vows to more than one saint to cut off the child's hair at his shrine. Successive growths of the child's hair are accordingly cut off at the shrine of each saint to whom the parents have vowed. This votal cutting of the hair is called manautí di jhand laháwan.

Circumcision.

10. From three months to ten years boys are circumcised. No particular age is fixed, but it is thought well to get the ceremony over soon, because boys are less liable to attacks of jins after it has been performed. Among the rich much money is spent, and the rite is performed with as much display as a marriage. It is called the small marriage. Taking a wife is the big marriage. The operator is always a Pirhaín, a caste who live by this industry. They are so named because the Prophet gave his coat, "pairáhan," to Sheikh Núr, one of their ancestors, as a reward for circumcising a convert after a barber had refused. Since then this service is not performed by barbers. The local name for circumcision is tahor, said to be derived from tahúr, which means in Arabic purifying.

Ceremonies connected with marriages.

11. Marriages are arranged on two principles. An exchange of brides is effected, this is called vatá; or money is paid for a bride. Money marriages are called de allah námi marriages, but, as the people themselves admit, the name is a fiction. A few persons do not receive money for girls. They are not looked on with commendation, but are ridiculed, as parting with a valuable property without receiving an equivalent. There are no forms of betrothal. The relations manage the matter without the intervention of go-betweens, such as Nái or Mirási. From reading the accounts given by residents of this district it would seem as difficult to arrange an engagement as to make a treaty. There is a capital account given of the conferences in the vernacular Settlement Report by Kází Ghulám Murtázá, Extra Assistant Settlement Officer. Even after everything is settled, the mothers of the parties meet, and have a long talk in which they pretend to be personally anxious for the marriage, but put forward every obstacle that can be imagined. These are gradually explained away, until the aversion of their husbands to the match alone remains. After discussing the obstinacy and perverseness of the husbands, one gives the sign of giving way by saying, "Well, I suppose we must put compulsion on these stupid men." After that, all hindrances disappear like smoke. All the conversation at these mothers' meetings is as well known beforehand as the questions and answers of a catechism. When the engagement has been settled, the bridegroom's friends take the following clothes to the bride:—

A sheet—bhochhan or chuní.
A cholá.
A petticoat.

Custom varies as to whether the bridegroom should accompany these presents.

The following ornaments are also given:—

A pair of kangans or bracelets.

A hassí, a solid necklace.

A mundrí or ring, with a phatí or sort of shield on it.

The kangans and hassí are not given by poor people, but the mundrí and phatí are *de rigeur*, and in the opinion of the women no betrothal is complete unless the mundrí and phatí are given. The account of how the bridegroom's family are mulcted is very amusingly given in the vernacular Settlement Report, but is too long to be repeated here. To get a bride by an allah námi marriage cannot cost the bridegroom less than from Rs. 70 to Rs. 100 at the very least. The actual ceremonies of marriage consist of two parts: (1) the nikáh, or wedding ceremony according to the Muhammadan ritual; (2) the ceremonies which are not connected with the religious rite. These are all known by the general name of sagan and are very interesting, some are directly borrowed from the Hindu rituals. In others, remnants of the time when marriage by capture prevailed can distinctly be traced. Others are connected with the personal adornment of the bride and bridegroom. A marriage consisting of the bare nikáh and without any of the usual ceremonies is called a dhangerá, which means a kicking-strap tied on a cow while milking. The term is sufficiently expressive. A few days before the marriage the plaits of the bride's hair are solemnly opened by the most honoured women of both families. Her body is rubbed with chikún, a mixture of turmeric, barley, flour, and sweet oil, to increase her personal beauty. With the same object she is bled. The bride is furnished with an iron knife, and she is never allowed to be unaccompanied by a female friend. Similarly, for two days before the wedding and during the wedding, the bridegroom is armed with a knife or sword, and a friend of the same age as the bridegroom is appointed to accompany him day and night. This companion is called sabálá or ánhar. This custom is evidently a relic of marriage by capture, the bride's arms and companion being intended for defence, and those of the bridegroom for aggression. On the day fixed for the marriage, the bridegroom's party, called janj, proceed to the bride's house. The nikáh is read by the Mullán. New clothes are then sent by the bride to the bridegroom, and by the bridegroom to the bride. Then the bridegroom, taking a pillow under his arm and accompanied by his ánhar, proceeds to the bride's house. On the threshold is an inverted chhúní or lid of a ghará, underneath which is a rupee, 8-anna or 4-anna piece. Before entering, the bridegroom stamps on the chhúní with his foot. If he fails to break it he gets well laughed at by the women. The potter, and, among Magassí Bilúches, the barber, appropriates the coin. The breaking of the chhúní represents the demolition of the last defences of the bride's party. After the bridegroom has entered the bride still offers a show of resistance. The bridegroom first lifts her by force from the seat on which she is, to another. Then she presents her closed fist to him, in which is a lump of gúr. This, after pretended struggles, he forces from her, and the bridegroom's

victory is complete. Then follows the sir mel, or joining of heads, which represents the consummation of the marriage, though this does not actually occur until the bride reaches the bridegroom's house. The sir mel is usually performed simply by the chief women of the bridegroom's family holding the heads of the bride and bridegroom together. Among persons of position the sir mel is effected as follows. The ânhar leads the bridegroom to the spot where the bride is sitting with her hands over her face and a kurán before her. The bride's companions give the bridegroom leave to uncover the bride's face. He does so. The bride's glance should first fall on the kurán, then on her husband. Then follow a number of ceremonies, most of which are taken from the Hindu rituals, and some of which point to abundance and increase. The bride and bridegroom are seated on a basket. Their clothes are knotted together, and the Mirásin places the knot seven times on the head of each, while she sings the verses appointed for the occasion. This ceremony is called láwán. Then the Mirásin places a flock of cotton on the bride's head. The bridegroom blows it away seven times. This is called phúl chunnan. Then the bridegroom holds his hands open and joined together with the palms upward. His hands are filled with flour, til or salt. Underneath his hands are placed the hands of the bride. He allows the flour or salt to run from his hands into the bride's. Then the bride runs it into his hands. This is done seven times, and is called til vehtrí. By this time the night is well advanced and the bridegroom's party return home, taking the bride and a female friend. Sometimes the bridegroom's party do not return home till the next day. The bride remains seven days in her husband's house. These seven days are called satúvárá. After this she returns to her parents' house for a time.

Which ceremony is conclusive evidence of betrothal and of marriage.

12. It may be asked which of the ceremonies described would, if proved to have occurred, be conclusive evidence of the often disputed fact of a betrothal and of a marriage willingly made by the bride. Of course every part of the ceremonies would be corroborative evidence, but if it was proved that a woman received her phatí and mundrí, the betrothal may be admitted to be complete, and if the sir mel be proved to have taken place, the marriage may be accepted as an accomplished fact. More weight is really attached to the sir mel than to the nikáh, which is generally done most perfunctorily as far as the woman's consent is involved. Dhangera or "kicking-strap" marriage, if denied by the brides, should be looked on with the greatest suspicion by a Civil Court.

Ceremonies connected with death.

13. At the moment of death, alms are given to the poor. The corpse is washed by the Mullán if deceased was a man, and by the Mullán's wife or by the female relations if deceased was a woman. The corpse is dressed in grave-clothes called kafan, is placed upon a charpoy, and over it is spread a rich cloth called uchhár. The corpse is carried to the graveyard by the friends and relations. The uchhár is the perquisite of the grave-digger. The corpse is placed in a shelf (sámí or asámí) at the side of the bottom of the grave. Its

head is towards the north, and the face to the west. Near the mouth is placed a brick, with the kalma written on it. No food is cooked that day in the deceased's house, but friends send food for the family, and for visitors who come to offer their condolence. Such food is called kaurá vatá, and visits of condolence, mukán or parchháwán. At every stage of the proceedings, presents are given to the Mullán, and for forty days after the death, food is daily given to him. There is no doubt of the truth of the local saying—

Fajar de vele Mullán karin phukár
Yá Rab Sáin koí chokhá már!

In the morning the Mullán breathes a prayer
"O Lord God! kill a rich man to-day!"

Two useful words to remember in all domestic ceremonies are kándhá, an invitation, and vail, a present to the attendants, midwives, barbers, Mirásis, Mulláns and Brahmans. One would like to be able to trace a connection with the old English word vail, meaning present to servants.

Hindu ceremonies.

14. The ceremonies practised by Hindus differ little from those of other parts, except that in consequence of their greater poverty there is less display. They frequent the Muhammadan shrines, and cut off their children's jhand there, in the same way as has already been described. On the way to a funeral, music and dancing accompany the party, and all kinds of buffoonery are practised.

Amusements.

15. Most of the amusements of the people have been incidentally mentioned already, such as the racing of bullocks at Visákhi, going to fairs at shrines, marriages, funerals, and visits of condolence. Wrestling, here called malhan, goes on at every large meeting. Jhumir is a circular dance which Jats dance at weddings, and wherever they happen to collect in large numbers. They move round in a circle, dancing and clapping their hands in time. Three kinds of jhumir are well known: lammochar jhumir, or southern jhumir; traitári jhumir, *i. e.*, jhumir with three claps of the hand; tikhí jhumir, or quick-time jhumir. A young man who can't dance jhumir is very lightly esteemed. The ladies will greet him with—

"Na jhumir na tárí,
Te ajái mánh te dárhí."

"Can't dance jhumir or clap your hands!
Why, the very beard on your face is no good."

The Kirárs play chhej, a very stupid performance, in which they stand in a circle with sticks like policemen's batons in their hands, and move round to the beating of a drum, striking their sticks together as they move. Boys' games are—

Ditte danda, or Tip cat.
Danda giti, or Hopscotch.
Chida, Marbles.
Kanda, a sort of prisoner's base.
and
Doda, Base.

Superstitions.

It would be difficult to find a more superstitious people in the world than the residents of this district. They are firm believers in jins and the evil eye.

Sap dá khádá bachde.
Nazar dá khádá nahín bachde.
The snake-bitten escapes.
He that is affected by the evil eye escapes not.

The jins appear to be a simple lot, and are easily outwitted or diverted. A ring drawn in the dust, round a heap of corn or a person, will keep them away. The knives which brides and bridegrooms wear are intended to keep jins off. In consequence of this credulousness, Syads, Kureshís, the keepers of shrines, and any impostors who can inspire confidence, drive a great trade in selling amulets (rakhrí, chaprí and phúl). Among other amulets may be mentioned "sinhárí da phúl, the charm of the churndasher." This has the effect of attracting all the butter in the churns of the neighbours into that of the possessor of the charm. The price paid for an amulet is called mokh. It would be hopeless to attempt to note all the superstitions, but the following may be mentioned: if an enemy gets any of the chíkún which is rubbed on brides to increase their beauty, and burns it, he will cause disunion between the newly-married pair. Among agricultural superstitions are the following: on the bank of the Indus, in the Sanánwán Tahsíl, it is believed that if methra (*Fenugreek*) seed is sowed before noon, methra will come up; if sowed after noon, ussún (*Brassica eruca*) will come up. It is commonly believed that an animal born in Sáwan (July-August) will be unlucky. The strength with which this belief is held was proved this year (1880). Six Government stallions were, for the first time, provided for this district, and from April, when they arrived, to July, were eagerly resorted to. From July to October hardly a mare has come to be covered. In November they are beginning to come again. The extreme respect and tenderness with which the people regard persons of reputed sanctity are remarkable. The younger brother of the keeper of a shrine of noted sanctity in an adjoining district used to frequent Kot Adú during the settlement. He used to get hopelessly drunk, and be seen sprawling about the prostitutes' huts in open day. The Muhammadans of the place always said of him when in this state "he is engaged in devout contemplation." The people, Hindus and Muhammadans, are thorough fatalists. They never personally commit thefts or murders, or bring suits without foundation. It is that unpleasant power, their Nasíb, which caused all the trouble. They are firm believers in omens. The distinction between good and bad omens under different circumstances is bewildering. One omen is, under all circumstances, good, that is, to put up a blue jay; and, strange to say, to meet a Mullán, a Brahman, a fakír or a beggar is always a bad omen.

Language.

16. The language is the same as that spoken in Mooltan, Bahawalpur, Dera Ghází Khan, and the south of Dera Ismail Khan and Jhang. It is called by the people Hindí and Hindikí, and, in the Bilúchí-speaking parts of Dera

Gházi Khan, is known as Jagdallí, from Jagdal, a Jat. It has been named Mooltani by Europeans, but no native knows it by this name. It resembles Punjabi and Sindhi, and differs from both in many particulars. The case-endings agree partly with Sindhi and partly with Punjabi, while some are peculiar to Mooltani. It resembles Sindhi, Pashtu and Persian by using an intricate system of pronominal suffixes from which the sister dialects of India are happily free. The inflections of the verb are peculiar to Mooltani, and differ both from Sindhi and Punjabi. Mooltani excels the Indian dialects, and resembles Sindhi in having a passive voice instead of being reduced to the clumsy compound with jáná, to go. Maríndán, I am being beaten, is much handier than the Hindustani, máin márá játá hún. Mooltani is a pure Sanskritical language. It contains many Sindhi and Punjabi words, and has a copious vocabulary of its own. It has an abundance of grammatical forms which show that it is in an inferior state of development. Like all languages spoken by a rude people, Mooltani is extremely rich in concrete, and absolutely without abstract words.

Literature.

17. There are no written books in Mooltani, but there is a large body of unwritten poetry, songs, proverbs, riddles and aphorisms which throw great light on the national customs and thought. Whenever Jats collect they spend a great part of the night in singing dorhás, or couplets. To be able to quote an appropriate proverb will send away a Jat laughing, although the moment before he has been vowing that he has just undergone all manner of violence, the least of which is robbery and murder. And a knowledge of their sayings and songs makes association with the Jats much more pleasant than it would otherwise be. It has been attempted elsewhere to give a fuller account of the Mooltani language illustrated by folk-lore.

General character of the people.

18. The account given of the superstitions will not have given a very high opinion of the character of the people, but they have many good points. They are very hospitable. "Not even an enemy should go away when the baking-plate is put on the fire," says a proverb. They are ready to render help to one another. If a man's house is swept away by a flood, the whole village will help him to save his property. If his cattle are stolen, he has no difficulty in getting several parties of men to follow the thieves. At ploughing and sowing time they are ready in bringing their bullocks and ploughs to help. They are very docile, and only require kindness and firmness to be easily managed. At the same time, when an order is distasteful, though it meets no open opposition but often ready assent, yet it is liable to be frustrated by stolid indirect resistance. There never was a people that better understood the "I go, sir, and went not" kind of disobedience. Morality is very low. The common people will steal anything they can. They are so mendacious that the pleasure of associating with them is spoilt by the ever-present knowledge that you may be taken in. Sexual immorality is universal. They are not a cheerful people. In conversation they seem to remember nothing but droughts, failures of canals,

blights, deaths of cattle, and every possible misfortune that can befall a farmer. They are absolutely wanting in any public spirit. I have heard a Tahsíldár, as the worst punishment he could inflict on a recalcitrant zamíndár, threaten to get him appointed on the district committee.

CHAPTER V.—AGRICULTURE AND OTHER INDUSTRIES.

Division of the district in regard to agricultural operations.

1. With reference to its agricultural operations, the district consists of three parts, a division which is based on the descriptions of irrigation—

1. The alluvial tract comprising upwards of one-third of the cultivated land, and depending for its irrigation on the rising of the rivers assisted by canals in about one-seventh of its area.
2. The canal tract comprising more than half the cultivated area of the district, and dependent on inundation-canals assisted by wells.
3. The well tract containing about one-sixteenth of the cultivated area of the district and entirely dependent on wells.

Rotation of crops and fallows.

2. In the alluvial tract no rotation is observed, nor is it necessary. The strength of the soil is renewed every year by the deposit which the rivers bring down. In the canal and the well country the necessity of changing the crop is thoroughly understood. The general practice is to divide each estate into two parts. In one part, kharíf crops are sown, in the other rabbí. The following year, kharíf crops are sown in last year's rabbí half, and rabbí crops in last year's kharíf half. This alternation is called dúpar. There are exceptions to this rule, especially in the richer lands and where manure is abundant. In sugarcane lands the rotation is generally turnips, sugarcane, indigo and wheat. These lands are always under crop, and the strength of the soil is maintained by heavy manuring. Wheat and barley are believed to do well after indigo and poppy. Wheat, cotton or melons thrive after sugarcane. Jawár, bájra, moth, múng and másh do well after wheat and barley. The five kharíf crops just mentioned are usually the end of a series of crops. After any of them the soil is considered to be exhausted, and to require renewal by manure and constant ploughing. The people appreciate repeated ploughings as a restorative. Their expression is that the mouth of the soil is opened by the ploughs, and attracts the sun and moon. In the richer parts the land is never allowed to lie fallow. Where manure is scarce, land is cultivated every alternate year. Where the soil called draman, which is easily exhausted, exists, it is sometimes allowed two or three years' rest between each crop. All rules of rotation and fallows

are liable to be broken if the canal-running season is prolonged. Like inundation-water, canal-water is so rich in silt that it manures as well as irrigates.

Manures.

3. The alluvial tract is never manured. The deposit renews its strength. In only one case is inundation hurtful, that is, when the flood deposits its silt on the land nearest the river bank, and as it finds its way inland flows over salt land which it imbibes. When in this state it is called Kálá Páni. In the remainder of the district the use of manure is general. The manures in use are—

1. Farm-yard manure.
2. Indigo refuse called valh.
3. Clay from the canal spoil banks.
4. Sand from the Thal sandhills.

The two last kinds are known as paná. Manure is applied by being worked into the soil. Cattle are tied in lines called dhárá. Sheep and goats are penned on it. In the Thal a fee of a quarter of a sér of grain will procure the services of a score of goats and sheep for a long winter night. The fee is called áhali. Manure is pulverized and applied by top-dressing to growing crops. In this state it is called chháná. It is applied by handfuls to young plants. The name for this is chungí devan.

Farm servants and laborers.

4. Farm servants, here called ráhak, are usually hired by the year, *i. e.*, from the beginning of Harh to the end of Jeth. They are sometimes hired by the half-year. Besides the usual farm work, if the master be responsible for supplying labor on the canals, the servant is sent to do the work. The wages of a farm laborer consist of four parts—

Khádh, or diet	...	...	From 1 to 1½ maund per month.
Kirhiún	...	...	Cash at 8 annas per month.
Bijrái	...	...	A present at sowing and harvest.
Varsá	...	...	A present of from 2½ to 3 maunds in a lump.

Clothes are sometimes given. The ráhak also gets fodder for one animal, and a share in the greens cooked for the master's family. He accompanies the family on pilgrimages and gets fed going and returning. The pay of a ráhak cannot be less than Rs. 7 or 8 a month. Reaping is usually done by laborers, hired temporarily. They get one sheaf in every forty as their wages. Cotton is picked by women and children, who get a share of what they pick as their wages. Winnowers are hired, and receive one-fortieth of the grain as wages. Indigo is churned by hired laborers who get from Rs. 8 to 10 per month.

Agricultural instruments.

5. Agricultural instruments do not differ from those in use in the rest of the Punjab, but their names, and those of agricultural operations, are Sindhi or peculiar to Mooltani.

Principal crops and area under each.

6. At settlement the following were found to be the chief crops grown:—

Kharíf.

Cotton	... ...	29,714 acres.
Indigo	... ...	20,830 „
Jawár	... ...	20,817 „
Bájra	... ...	17,947 „
Rice	... ...	10,276 „
Sugarcane	... ...	4,349 „
Moth	... ...	4,988 „
Til	... ...	4,081 „

Rabbí.

Wheat	... ...	201,497 „
Peas	... ...	25,385 „
Gram	... ...	12,627 „
Turnips	... ...	12,500 „
Barley	... ...	10,962 „
Ussún	... ...	8,545 „
Mohri	... ...	4,245 „

Kharíf crops. Cotton.

7. Cotton is grown in every part of the district except the inundated lands. The land is prepared in February and March. Five to seven ploughings are given, and the clod-crusher is dragged over the ground after each ploughing. The seed is prepared by being rubbed in cow-dung, and then dried. The best time for sowing is April. The seed is sown broadcast, and, after being ploughed in, the land is divided into beds of a suitable size for watering. Two irrigations are then given at a short interval from one another. When the young plants are about two feet high, a plough is driven lightly among them to loosen the soil. The cotton ripens at the end of September, and picking goes on from then till December. Cotton is picked by women every eighth day. They receive about one-sixteenth of what they pick as wages, which are called bhánji. The first cotton picking is called láwin pheran, and each picking is called an oya. Four to eight sérs of seed are sown to the acre, and the outturn is about five maunds. The enemies of the cotton crop are múlá, a blight that begins at the stem, and spreads over the plant, the soil becoming water-logged (soma), and a red worm that attacks the cotton in the pod.

Indigo.

8. Indigo grows only in the richest soil, but has this advantage, that it produces fine crops in poor draman land. The land is prepared in February and March, and the seed is sown from March 15th to May 15th. Indigo is usually sown every year, but it is possible to get crops for three years off the same plants. In its first year it is called "rop," in the second "mundhí," and in the third "trundhí." Indigo is ready for cutting from July 15th to September 15th. It is in its prime when it has been from 12 to 15 days in flower. If the flowers fade and become yellow before it is cut, the outturn will be small. It is cut in the morning and

carried in bundles to the vats, where it remains till the afternoon. Then the churner (vilora) comes and puts the indigo into the vats, and weighs it down with heavy logs of wood. Water is turned on, and the vats are filled two-thirds full. The vats are in sets of three, two large and one small. A set of vats is called a jorí, and a number of sets together, a khárhá or akhárhá. When one watch of the night remains, the indigo has been sufficiently steeped. The churner takes out the plants, and, with a churning-stick called madhání, churns the water for about two hours. The sediment is allowed to sink to the bottom of the vat, and the water is run off. The sediment is then placed in the small vat, and is allowed to settle again. Then the water is run off a second time. The sediment is removed, and made into cakes called gítí, and dried. At each churning a pair of vats produce from 1½ to 3 sérs of indigo. The preparation of the indigo is most carelessly done. The indigo is soaked in muddy water from a canal. While the cakes are drying, no precautions are taken to prevent sand and earth being mixed with the indigo, and some people deliberately mix sand with the indigo. The consequence is that, though this district should produce better indigo than Bengal, because there is little rain, which is the curse of the Bengal planter, Muzaffargarh indigo fetches only from Rs. 40 to Rs. 90 per maund, while Bengal indigo sells for Rs. 200. If indigo is grown for seed, it ripens in November and December. It sells for Rs. 2-8 to Rs. 3 per maund. Sixteen sérs of seed are sown to the acre, and the outturn is fourteen sérs of indigo dye. The stalks and leaves, after being taken out of the vats, are called valh, and form a valuable manure.

Jawár.

9. Jawár is sown for fodder in March and April, and for grain in July and August, but in the Thal a second sowing is made for fodder in July. The grain ripens in October, and, while ripening, is protected from birds by men on high platforms with slings and crackers. The ripe ears are cut off and thrashed. A maund of seed is sown to the acre, and the outturn is from four to six maunds per acre.

Bájra.

10. Bájra is sown from July 15th to August 15th. It is protected while ripening like jawár. When the ears are ripe, they are cut off, and the stalk is left standing. The stalks of bájra are never cut and stored for fodder like jawár, but are left standing for the cattle to eat, and great waste is the result. Eight sérs of seed are sown to the acre, and the outturn is from four to seven maunds.

Rice.

11. Rice is sown from 15th April to 15th May in nurseries, which are manured a hand-breadth deep with ashes, or finely pulverised manure (páh), and which are very carefully watched and weeded when the seedlings are about eight inches high, which they become in a month. They are planted out at the distance of a finger from one another in well prepared land in which water is standing. This water is allowed to dry up once, but after that the plants are kept submerged. Rice is one of the few crops

which is carefully weeded. It ripens from August to October. The grain is extracted by the sheaves being beaten against a log or a bank of prepared clay. It is firmly believed in the south of the district that if any calamity happen to a rice crop it will turn into samúká. The outturn of rice is from eight to ten maunds per acre.

Sugarcane.

12. Sugarcane is grown in every part of the district except the Thal and the inundated tracts, but, as it requires capital and abundant manure, it is mostly found in the neighbourhood of towns. The selection of land for the next year's sugarcane is generally made in land which has just borne wheat. Beginning from May, the land is ploughed from four to five times during the summer. After each ploughing the land is rolled and levelled. It is then heavily manured. Between September and January a crop of turnips is taken off the land. The local theory is, that turnips do not exhaust the land. The truth is, that fresh unrotted manure is used which requires the extra handling and watering caused by raising a crop of turnips to make it sufficiently decomposed to be beneficial for sugarcane. After the turnips have been removed, the ground is ploughed eight times more and rolled. The sugarcane is then sown in February and March. Canes for seed have been stored in mounds covered with earth called "tig," since the last year's harvest. These are now opened, and the canes are cut into pieces with one or two knots in each. A plough, which has a brick fastened across the sole to make a wide furrow, is driven through the ground. A man follows, who places the pieces of sugarcane continuously in the furrow, presses them down with his feet, and covers them with earth. Then a log of wood called gihal is dragged over the field. After planting, the only care which sugarcane requires is constant watering and hoeing. Judging from the accounts of other countries, hoeing is not done often enough. Two hoeings are considered sufficient. Sugarcane is cut and crushed from the end of November to the end of January. The double-roller crusher is always used. In the mode of crushing and the management of the labor required, this district does not differ much from the rest of the Punjab, but a few points may be noted. There are ten attendants on the crusher and gúr boiler. The crusher is worked from midnight to 10 A.M. This time is chosen as less severe on the animals than the day, and also because fewer visitors come at this time, it being *de rigeur* to give every caller as much juice and cane as he can eat, drink and carry away. It is very difficult to estimate the net profits of growing sugarcane. Each owner extracts his own juice, and makes his own gúr. The wages of the workmen are paid in every possible form. For instance, the dhorá, or man who puts the canes into the crusher, gets one blanket and a pair of shoes; when crushing begins, a quarter of a sér of gúr and a chitak of tobacco per day, Rs. 4 and four sérs of gúr per month; a present of from Re. 1 to Rs. 2 when the work is finished, and fifteen sérs of wheat under the name of bijrái. Then, again, some attendants are paid by the kachá month, and some by the pakká month. A kachá month is a calendar month. A pakká month is when a sugar-crusher has been worked thirty times, and each time

has extracted ten maunds of gúr. A pakká month may occupy two calendar months or more. We get into more certain ground when the owner of the cane has no sugar-crusher. He pays the owner of the crusher one-third of the outturn of gúr, the owner of the crusher supplying all attendants and animals required for working it. With the best knowledge that we had at our disposal, we calculated for assessment purposes that the average net profits of sugarcane per acre were Rs. 53. An intelligent zaildár and sugar-grower of Jatoí has told me that the net profits of a successful crop were Rs. 200 per acre. The Extra Assistant Settlement Officer, who is a landowner and sugar-grower, estimates the outturn at fifteen maunds of gúr per acre.

Moth.

13. Moth is grown only in canal-irrigated lands, especially in the Thal. If intended for grain, moth is sown in June and July; if for fodder, it is sown in August. A single ploughing is considered enough for moth.

Til.

14. Til is sown in August, chiefly in sailábá lands. One, or at most two, ploughings are considered enough. Til ripens in November.

Samúká.

15. Samúká is a kharíf crop that deserves mention from the mode of its cultivation. As the rivers recede in August and September, they leave large flats of quick-sand, or rather quick-mud, which will not support a man. The sower, taking a ghará of seed, enters the mud, supporting himself on the ghará, and scatters the seed over the mud. As the mud dries, the plant springs up and produces grain in October. The grain is small and inferior. Kirárs eat it on fasting-days. The straw is considered excellent fodder.

Rabbí crops. Wheat.

16. Wheat is grown in every part of the district. The land is ploughed seven times. On the banks of the rivers, if the alluvial deposit be friable and soft, one or two ploughings are considered enough. The fifteenth of Katik, which corresponds to the end of October, is the day for beginning to sow wheat, and sowing should be over by the fifteenth of Manghir or the end of November, though in practice it continues throughout December. Drill-sowing is preferred in the alluvial lands, and broadcast sowing, inland. The essentials for a good crop of wheat are popularly considered to be—

1. Sowing in Katik.
2. Watering in Poh.
3. Top-dressing in Manghir.

Wheat is watered from three to nine times. The number of waterings depends on the kind of soil, and on the weather. Green wheat is largely used for fodder, and while the grains are tender the ears are roasted and eaten by human beings. The name of wheat so prepared is abhú. Wheat is liable to be attacked by the following diseases or blights:—

"Dhánák." In March and April the grains shrivel up, and become curved and black.

"Kání" or smut. The grains become black, and turn to a substance like ashes.

"Rátti," literally redness. The whole plant becomes yellow and shrivelled. It is said to be caused by extreme cold.

"Jhállá," a hot westerly wind that scorches up the crop.

The weeds noxious to wheat are bhúkal, jandal, jawánh or camel-thorn, and the thistles called lihú and kandiárí. The day for beginning to reap wheat is the first of Baisákh, about April 11th. Reapers are called laihár, and their wage is lái or lávi, nominally one sheaf in every forty. But the reapers scheme to make their sheaves large, and their share is now estimated at one-twentieth of the crop. Each day's reaping is carried in the evening to the threshing-floor called pír or bhájar, and in the north khalwárá, and is trodden out by oxen tied to a stake in the centre. The action of the oxen is helped by a heavy log, called phalá, being dragged by them as they move round. The cultivators rarely winnow their own wheat. They engage kurtánás, mochís and chúras to do it, and will sit still and see the corn and straw destroyed by rain rather than winnow themselves, if a winnower cannot be obtained. The heap of cleaned corn is called in the north dherí, and in the south, bár. It is divided among the various claimants, and as the cultivator has postponed paying his bills till harvest time, appropriately uses the proverb,

Bár cháwan te Kiámat áwan.
Dividing a heap of corn is as bad as the Judgment Day.

Kinds of wheat grown.

17. Wheat is divided into kanjhári, or bearded, and rodé, or beardless (literally bald); and into red and white. Other kinds are, paman: the grains are longer and thicker than any other kind. It is cultivated as a luxury, and used for parching, for making the edible called ghúnghnián and vermicelli, mendhiánwáli or daúdi, the ear is small and curved. The grains are small, white and curved. It is so named because the grains being close set are supposed to resemble the plaits of a girl's hair.

Amount of seed and outturn.

18. If the sowing is early, *i. e.*, in Katik, six pais, which equal one maund of seed, are sown to the acre. If the sowing is late, *i. e.*, in Manghir and Poh, eight pais, which equal one maund twelve sérs, are sown to the acre. The amount of seed is less in drill than in broadcast sowing. The outturn of wheat is from six to ten maunds per acre.

Barley.

19. The cultivation of barley closely resembles that of wheat. In the south of the district a large-eared purplegrained species is grown which is called indargán. This is a different plant from the indargán of Stewart's Punjab Plants, page 142. It is grown as a delicacy, and is chiefly used for parching.

Peas.

20. Peas are sown in sailábá land in October and November. One or two ploughings are considered enough. They are used as fodder, and the green pods are roasted and eaten under the name of dhadhrián and amián. When

ripe, they are used for dál, or ground and made into bread. Peas that grow up of themselves are called pokhí. To sleep in a pea field is believed to produce a kind of paralysis called munda, and a diet of peas causes the disease known as wá. Pea bread is considered very satisfying. A quarter of a sér of pea bread will satisfy a man to the extent of inducing sleep. From 20 to 30 sérs are sown to the acre, and the outturn in grain is from three to five maunds.

Gram.

21. Gram is sown in sailábá land during October. One or two ploughings are sufficient. The seed is sown broadcast. The young leaves are known as "palí." They have a pleasant acid taste, and are eaten as a vegetable. Gram ripens in April. The pods are roasted and eaten under the name of amín and dhadhrí. "Amín," plural "amian," is used in the north, "dhadrí" in the south. Amín is said to be derived from "ham chunín-bád, may it be like this," because gram ripens first of the rabbí crops. Ten sérs are sown to the acre, and the outturn is from three to five maunds.

Turnips.

22. As already described under sugarcane, turnips are sown to prepare the land for a kharíf crop. The seed is sown in September, and the turnips are ripe in January. They are mostly used as fodder, and ripen just in time to relieve the failing stocks of other kinds of fodder. The leaves, stalks and roots are eaten as a vegetable, and the root is cut in pieces and dried for summer use. From the seeds is expressed a bitter oil. The plants intended to provide seed for next sowing are prepared in a peculiar way. When the plant is in its prime, the leaves are cut off two inches from the root, and the root is deeply scarified. It is then watered, and sends up a fine flower stalk. The wonder is that the plant survives such ill usage. A turnip prepared in this way for seed is called dakún gonglún. Ussún is the tárá mírá of the Punjab (*Brassica eruca*). It is sown in September. When sown alone or with másh, it is intended that the seed should ripen. When sown with peas or gram it is intended for fodder. One or two ploughings are sufficient. While green, it is eaten as a vegetable. Ussún ripens in March and April. The sheaves are collected on a piece of hard ground, and the seed thrashed out with sticks. The oil extracted from the seed is used for burning, anointing, and making sweetmeats. In very hot weather, ussún is mixed with bruised barley, and wetted and given as a cooling food to buffalos. Four sérs are sown to the acre, and the outturn is from one to two maunds. The belief that methrá seed, when sown after noon, comes up ussún, has before been mentioned. A plant of ussún is like a turnip which has gone to seed, and methrá is *Fenugreek*.

Ussún.

Other crops of the *Brassica* order.

23. The other plants of the *Brassica* order cultivated in this district are arhion or ahur; mustard, (*Brassica juneca*); sarhiún, Punjabi sarron (*Brassica campestris;* sathrí, a plant of the *Brassica* order, the proper name for which I do not know. It is called sathrí because it ripens in sath (sixty) days.

24. Mohrí is *Ervum lens*, Punjabi masar and masúr. It is sown in sailábá land at the end of October. It is sown alone and with barley broadcast and in drills. If both mohrí and barley are sown broadcast, the mohrí is sown first and the barley afterwards. If drill-sowing is chosen, mohrí and barley are sown in alternate furrows. Its young leaves like gram are called palí. It ripens in April, and is made into dál. It is reckoned a humble valueless crop. A proverb on swaggerers says—

Mohrí.

Dál mohrí dá dam puláo dá.
" He is only mohrí dál and gives himself the airs of a puláo. "

It is believed, like methra and ussún, that, under certain circumstances, mohrí turns into a weed called rárí. Sixteen sérs are sown to the acre, and the outturn is four maunds.

25. None of the other rabbí crops require mention.

Other rabbí crops.

Besides agriculture there are few means of livelihood in this district. Common country cloth and blankets are woven everywhere. At Dairadinpanah good diaper is made. Chatai matting is made of the date-leaves by kirárs in every part of the district. Fair paper is made at Sítpur. In the town of Alípur is a snuff manufactory, whose snuff is largely exported to Sindh, Baháwalpur and Dera Gházi Khan.

Other Industries.

Fishing provides an industry for a very large number of people. The fishing tribes Jhabels, Kihals and Mors live almost entirely by it, and other people take to fishing for support as well as amusement. The instruments used are—

Fishing.

(1.) The drag net called chhekú jál or gháwá. This is made of several nets fastened together.

(2.) Narí. This is a stationary net which is kept in a perpendicular position by means of floats made of reeds.

(3.) The cast net, sátú jál.

(4.) The kur is a beehive-shaped frame of wood, lined with a net. It is jammed to the bottom of shallow water, and secures whatever fish are inside.

(5.) Karí is an eight-sided cage surrounded with netting.

(6.) Sangolá, a spear like that carried by chaukidárs. This is used also for spearing tortoises.

Fish are also caught with the hook and line in deep water, and in the rivers. The other instruments are too weak for fishing in the rivers.

CHAPTER VI.—FORMER REVENUE SYSTEMS, TENURES PAST AND PRESENT. DIVISION OF CROP.

1. An account of the various governments that preceded the union of this district under Sáwan Mal has been given in Chapter II. Very little is known of their revenue system. In the Thal Nawábs' country, the revenue on all crops, except cotton and tobacco, was taken in kind. The pay of village servants, including religious dues, was set aside from the gross produce. Of the remainder, the Nawáb took one-fifth or one-sixth. A cess called tik was also taken at the following rates:—In the kharíf harvest, when the government share was one-fifth, the rate of tik was Rs. 4 on each path, * and when the share was one-sixth, tik was Rs. 2 per path. In the rabbí harvest, when the government share was one-fifth, tik was Re. 1 per path; when the share was one-sixth, tik was Rs. 2 per path. It is difficult to understand the difference of the proportion of tik to the government share in kharíf and rabbí, but these rates are well established. Tik means the stone of a ring, and is said to have been first levied to replace the ring-stone lost by some lady-love of a Nawáb, who found the tax so convenient that he never ceased to levy it. It is not clear which of the neighbouring Nawábs first invented this device for raising his revenues. Whichever it was, they all followed suit, and the Nawábs of Baháwalpur and Mooltan also had their tik. Cotton and tobacco paid a rate per bigha, the amount of which is not known. The amount of tirni was fixed for each tract.

The Thal Nawábs' Revenue system.

2. The Baháwalpur Nawábs collected their revenue in kind, plus tik and a tax on indigo called moghlá. Moghlá was in some parts a fixed rate of Rs. 5 per maund. In others it varied according to the market price, *e. g.*, when indigo sold for less than Rs. 40 per maund, the rate of moghlá was Rs. 3 per maund, when it sold above Rs. 40, moghlá was Rs. 6. All the Nawábs took zakát or transit duties, and must have levied many taxes besides, for Sáwan Mal could not have invented the innumerable cesses we shall find him collecting, and still have the reputation of being such a good ruler.

Revenue system of the Baháwalpur Nawábs.

3. Much more is known of Sáwan Mal's revenue system than of that of the Nawábs. The changes effected in the system of the Nawábs by Sáwan Mal may be briefly stated as follows: He commuted the government share into cash at a price a little higher than the market price, and made the cultivators take back the government share and pay the price so fixed.

Sáwan Mal's Revenue system.

4. In describing Sáwan Mal's system, one is liable to fall into the error of stating, that any single administrative act or procedure applied to the whole district, whereas, from the want of record, the local area to which a particular act or rule extended cannot now be

The difficulty of describing it.

* Path is a measure of grain equal in weight to about 32 maunds.

known. For instance, when we read that Sáwan Mal levied half the gross produce, and then, by manipulating the market rate, turned the half into three-quarters, and on that collected a number of cesses, took the usual dues of officials and paid them only a pittance as salary, and appropriated the customary alms, we get a total which arithmetically comes to more than the gross produce of the land, and leaves no margin of livelihood for the cultivator, who was certainly so well off, that, 35 years after, he remembers the time of Sáwan Mal with regret. The truth is, that Sáwan Mal's assessments were adjusted on a very perfect local knowledge. He began low, and gradually raised the assessment as circumstances justified it. Thus, wells in the Thal were leased at fixed sums according to their quality, but when the lessee cultivated more than the usual area attached to one well, the fixed sum was set aside, and the whole crop was bataied. If the crop was unusually good, the kárdár thought that government should share in the prosperity, and at once levied a fee called nazar mukadamí. Again, if prices rose much after the rate fixed for commuting the grain into cash, the kárdár levied a fee called shukráná, or thanks-offering. Thus the Diwán, though he had not thought of the improvement of communications, took advantage of the extension of cultivation, good seasons and the rise of prices as much as any Settlement Officer of the present day. Again, the Diwán always adhered to the ancient rate of the government share, but where it could be done, he raised the revenue by adding cesses, and at annexation it was found that where the rate of the government share was high, cesses were few; where the rate was low, cesses were many. In modern language, Sáwan Mal enhanced his revenue by means of cesses. The indiscriminate remission of these cesses, described in former settlement literature most incorrectly as "arbitrary modes of increasing the revenue by petty and vexatious dues," whereas they really made the burden uniform, was one of the causes why the first summary settlement worked so unequally. The difficulty in describing Sáwan Mal's revenue system arises from our present ignorance of the limits affected by any fiscal act. Here and there a fact or two remain, such as that moghlá was not collected in Sanánwán, or zakát in Murádábád Taluka. Cesses were numerous in Shahr Sultán, where the government share was one-sixth, and few in the neighbouring talukas of Sítpur and Dháká, where the government share was one-fourth, but enough is not known to enable us to say how each part of the district had its burden adjusted to its capacity. With this warning, an attempt may be made to describe the dealings of Sáwan Mal's government with the people.

Two classes of revenue payers.

5. Under Sáwan Mal there were two classes of revenue payers.

Pattadárs.

One class were pattadárs, or lessees who paid fixed amounts in cash for the wells cultivated by them. The amount usually varied from Rs. 12 to Rs. 24 a year, plus a nazaráná of Rs. 2 yearly. This rent was paid ½ in kharíf and ½ in rabbí. The area attached to leased wells was from 40 to 50 bighas. If a lessee cultivated more land than was entered in his lease, the crop grown in the extra land cultivated was bataied at the rates prevailing

in the neighbourhood. If from poverty or other reason the lessee failed to cultivate his land, no remission was granted. If the lessee grew the following superior crops, indigo, sugarcane, tobacco, rice or til, batai of them was taken, and the other crops grown were considered to cover the fixed rent. Lessees of rich wells were compelled to sow one bigha of tobacco in rabbí and ten bighas of til. In the rich talukas of Muzaffargarh, Khángarh and Murádábád, if the kárdár knew the crop to be unusually good, he set aside about 100 maunds of wheat or barley in rabbí, and 25 maunds of the kharíf crop as covered by the fixed rent. He then took batai of the remainder of the rabbí crop, and took zabtí rates on the remainder of the kharíf crop. Turnips, jawár and moth were exempt from paying anything to government. In well land, methra was also exempt, but in sailábá lands, methra paid zabtí rates. On a leased well of average quality the following crops were usually grown: in kharíf, five bighas of cotton and fifteen bighas of jawár or moth; in rabbí, twenty-five bighas of wheat, barley or gram, and five bighas of turnips. From the fact that special rules were made for the richer crops and for richer wells, and that in an average well no mention is made of the richer crops, it is probable that only isolated wells that were unassisted by canals were leased. The remarkable feature about the leased wells is the amount of interference that was permitted with the nominally fixed rent.

Bháolí.

6. The second kind of revenue payers were those who paid a share of the crop batai, here called bháolí, and bigha rates on certain crops. The share of the crop taken by government was called mahsúl. It ranged from $\frac{1}{6}$ to $\frac{1}{3}$ of the gross crop. There is no information to show how this share was originally fixed. Sáwan Mal seems to have adopted the share fixed from time immemorial, and to have equalized and increased it by means of cesses. Accordingly at annexation it was found that in those tracts where the mahsúl was high, cesses were few, and where it was low, cesses were many. An account of the cesses will be given hereafter. In the parts of this district near Mooltan city the mahsúl was usually taken in kind, because grain was required for the troops and the court. In the rest of the district the mahsúl was returned to the cultivators, who were obliged to buy it from government at a rate which was usually 25 per cent. above the market price. The following crops paid the bigha rates entered opposite each. This mode of paying revenue was called zabtí.

Kharíf crops.

Rawánh	... ...	Re. 1-0 per bigha.
Jawár grown for fodder	...	„ 1-0 „
Chilies	... ...	Rs. 4-0 „

Rabbí crops.

Methra	... ...	As. 10 to As. 12 per bigha.
Peas	... ...	Re. 1-0 per bigha.
Green wheat used as fodder		„ 1-0 „
Tobacco	... ...	Rs. 4 to Rs. 5-0 „
Saffron	... ...	Rs. 4-0 „

Cesses.

7. As already stated, cesses were extremely numerous, and were used as a means of equalizing the mahsúl, and of enhancing the revenue where opportunity offered. The cesses levied by Sáwan Mal have more than an antiquarian interest, because they are the form in which powerful proprietors now attempt to extort from tenants a rent higher than that fixed by custom or agreement. These cesses were taken either by government or by officials, and in no way formed part of the proprietor's dues. Proprietors now constantly include such demands in civil suits, and they have occasionally been decreed by courts which were ignorant of their origin. Every attempt to levy them should be strenuously resisted by the courts. Fines for criminal offences were always levied at harvests, and it is often difficult to distinguish between a cess and a fine. The following were the most common cesses. After them the fines are given. They are interesting as showing what offences formed Sáwan Mal's Penal Code. The cesses called nazar mukadamí and shukráná have been already mentioned. The others were:—

1. *Nazar Muharir*, also called páó mani. This was a quarter of a sér per maund on all crops, and was levied when the crop was weighed. The cess was of long standing. Sáwan Mal confiscated it and credited it to government.

2. *Faroí Karáwá* ("faroí," anything extra or beyond the regular receipts, and "karáwá," a field watchman) consisted of fines on cattle trespassing, levied by the watchmen engaged to watch the crop while ripening.

3. *Nazaráná* paid to officials, *e. g.*, presents made to muharirs on beginning the division of a field; a horse or a camel from holders of revenue-free wells, or wells held on favorable terms, a small nazar on máfi wells in order that there might be some record of them in the accounts. Nazars were taken on various pretexts, generally for the nominal pay of government servants, but really to increase the revenue. Nazars were strictly credited to government, but embezzlements took place.

4. *Dumbírí*, the pay of the persons who weighed the crop. This ranged from ¼ to 1 seer per maund. Besides they took whatever the cultivators would give them (jholí). Government took half of this cess, and half went to the weighmen.

5. *Muhassalí* was nominally levied for the pay of the field watchmen during the ripening and harvesting of the crop. Government took half the muhassalí and half went to the watchmen.

6. *Bhárá*, or carriage hire. The cultivators were bound to convey the government share of produce to the government stores. Sometimes a cess was levied to represent

the cost of carriage. It is a favourite practice of proprietors now to charge tenants with carriage. Agricultural fines were taken at harvest for the following offences: falsely weighing the government share, theft, adultery, killing kine, fighting, embezzling dharath or zakát, cutting female date trees, shisham, kikár and bér trees, destroying crops and cutting the harvest without permission, taking bribes. Four times the bribe taken was refunded.

Personal interference and rights of individuals secured.

8. Under Sáwan Mal there was a great deal of personal interference with the cultivators, and it was part of the administration to see that the rights of all persons attached to the land were secured. The kárdárs managed for the cultivators, made them cultivate, made the Hindus lend them money, and made the borrowers repay. The agriculturists were pitted against one another to cultivate. If one man did not cultivate his land, it was given to another who did. Similarly the rights of each person claiming part of the crop were faithfully paid to him. The menials were paid from the gross produce before the government share was taken. The remainder was divided between government, the zamíndárs, the chakdárs and the cultivators. The last three classes will be described under "Tenures." Government took the mahsúl in cash or kind as already stated. The zamíndárs received their mukadamí, zamíndárí or málikáná (it was known by all three names), at the rate of ½ sér in the maund. The chakdárs received their rent which was called "lichh" on the Indus and "kasúr" on the Chenab, and the cultivator received his rahkám or cultivator's due. It is important to note the shares into which the crop was divided under Sáwan Mal, because after annexation the settlement was made with the chakdárs, who accordingly began to take the mahsúl, and the aggregate of the mahsúl and lichh or kasúr formed the chakdár's profits on which the assessment was based.

Non-agricultural cesses.

9. The cesses unconnected with agriculture were—

(1). Tirní dúkán, a yearly fee of Re. 1, paid by all artizans, not by shopkeepers, as the name would seem to mean.

(2). Tirní shutarán, a poll-tax on camels. The rate varied from Re. 1 to Rs. 2 a year.

(3). Tirní rásán, a poll tax on female buffaloes, sheep and goats. The following were the yearly rates :—

	Rs.	A.	P.
Female buffalo	0	8	0
Sheep and goat	0	1	0

Cows, bullocks, donkeys and horses paid nothing.

10. The government also claimed from one-third to one-sixth of all fish caught in the rivers, lakes and ponds. The government share was commuted to money, and the fishermen were obliged to buy the government share at the price fixed.

Revenue from fisheries.

11. Transit duties (zakát) and town duties (chungí and dharath) were levied. Nothing is known of the rates or amount of this kind of revenue.

Town and transit duties.

12. The cutting of pipal and bohar trees was entirely forbidden out of respect for the scruples of the Hindus. All other trees were absolutely the property of government. If a person wanted a "tahli" tree, he was obliged to obtain a personal interview with Sáwan Mal and make his request. If it was granted, Sáwan Mal issued a written order to assess the value of the tree, and the price was paid before leave to cut the tree was given. Leave could be obtained from the kárdár to cut bér, kikar or siris trees on payment of from 8 annas to Re. 1. But the largest revenue was derived from date trees, and the most stringent regulations existed regarding them. Government claimed all date trees wherever grown, and the owners of land could no more cut date than tahli trees. Each year in the month of Hárh (June-July), an appraisement of the crop was made and the estimated weight recorded. The crop was then sold at a fixed price to brokers called baikhars (from bai, selling, and kharídan, to buy). The "baikhars" were not the owners of the land in which the trees grew. They were usually persons who had bought the dates for many consecutive years, and were seldom changed. A change was possible if a higher bid was offered, but in practice was rarely made. After the crop had been appraised, the responsibility of watching it till ripe fell on the baikhars, and an allowance was made to cover the expense of watching. The price of the dates was rigorously exacted from the baikhars, and a baikhar of some standing could, with the greatest difficulty get rid of the responsibility of buying the appraised crop at the fixed price. Rain and a fall of prices were most dreaded by the baikhars, but no remissions were ever given. Instances are known of their leaving the country and of their attempting to commit suicide, in order to escape the severity with which they were held to their contract. It is said that in early times the land-owners used to get one-fourth of the crop, but of late years Sáwan Mal had taken possession of the whole.

Revenue from trees, especially dates.

13. The revenue system above described was in full work at annexation. The Mooltan governor was taking mahsúl in cash or kind, plus cesses. He took the whole of the date crop, and was absolute proprietor of all trees. He levied a poll tax on artizans, camels, female buffaloes, sheep and goats. He also levied transit and town duties. At annexation, all cesses were abolished. The proprietorship of the dates was conferred on the owners of land, and a very low cash assessment made on the female trees. The ownership of other trees was surrendered to the land-owners. Tirní on artizans, and transit and

Changes of administration on annexation.

town duties were abolished. The tax on camels, female buffaloes, sheep and goats was maintained. The mahsúl was converted into a cash assessment in the following way: "The average payments for three years were converted into money at the market prices with a reduction of 10, 15 or 20 per cent., according to the state of the country."

The first summary settlement.

14. The average income of the preceding three years was as follows for two tahsíls:—

	Rs.
Muzaffargarh	3,46,287
Alípur	2,22,245

We unfortunately have not the income of the Sanánwán Tahsíl, which after annexation belonged to the Leiah District. The district was settled and the settlement reported according to the old talukas, of which there were 24 in the district. Captain Hollings, Deputy Commissioner of Leiah, settled the whole of the Sanánwán Tahsíl. Mr. Wedderburn, Lieutenant Farrington and Lieutenant James settled the rest of the district. The following was the result:—

	Rs.
Muzaffargarh	2,57,589
Alípur	1,82,737
Sanánwán	1,44,814
Total	5,85,140

This settlement worked very badly. The indiscriminate remission of leases made it unequal. The cultivators did not know how to manage for themselves. They had been used to rely on the kárdárs for arranging all details of agriculture, and this support was suddenly withdrawn. Even the great concession of ownership in the date trees was misunderstood. The people went in crowds to petition the Board of Administration. Their complaints were, that the system was new, that they could not arrange for watching the fruit, and that they did not know how to distribute the assessment among themselves. Then a great fall in prices took place. The Sikh collections were commuted to money at Re. 1-8 a maund for wheat. Immediately after, the settlement prices fell to 10 annas and 12 annas per maund. Dates before annexation sold at Rs. 2-8 per maund. In 1851 the price was Re. 1-12. The district correspondence between 1850 and 1857 reads as if there was continued famine in the district, while at the same time magnificent harvests are reported. During these years revenue defaulters were in jail for three months or more. Lambardárs threw down their pattas in court and clamoured for reduction. Proposals were made to sell villages for arrears of revenue. Reductions and remissions were largely given. The Deputy Commissioners reported on the general severity of the jama and suggested revision. The number of transfers of land attracted the attention of the Financial Commissioner, who was "convinced that the transfer arose from undue

pressure of the Government demand." It was during the first summary settlement, in the year 1855, that the demarcation of village boundaries was made by Mír Roshan Alí, Superintendent of Settlement. This was followed in 1856 and 1857 by the revenue survey.

The second summary settlement.

15. The second summary settlement began in 1854. Mr. D. Simson, Deputy Commissioner of Leiah, revised the jama of the Sanánwán Tahsíl which then belonged to the Leiah District. He granted a remission of 10½ per cent., and fixed the jama at Rs. 1,29,780. In 1857 Captain Graham revised the jamas of the Muzaffargarh and Alípur Tahsíls. He raised the jama 6 and 21 per cent. respectively. The action of the Settlement Officer in increasing a jama already too high seems to us now incomprehensible, but the reasons for it are to be gathered from the correspondence. The year 1857 was unusually favorable. The rainfall was good. The rivers rose well and seasonably, and there was an abundant supply of water in the canals. The mutiny was going on in Hindustan and there had been risings in Mooltan and Gugaira. The favorable seasons induced the Settlement Officer* to fix his jamas too high, and the fear of being thought disloyal induced the land-owners to accept jamas which at other times they would not have looked at. But even Mr. Simson's jama in Sanánwán was felt to be severe. The Deputy Commissioner in April 1860 retorted that that tahsíl was "really suffering under a too heavy and badly distributed assessment. In Alípur and Muzaffargarh the settlement, as might have been expected, broke down in a year and a half. The Lieutenant Governor, when sanctioning the revision, wrote that a perusal of the report has convinced the Lieutenant Governor that instead of being increased, the jama ought to have been largely reduced."

The third summary settlement.

16. The third summary settlement was made by Lieutenant Tighe for the whole district. By this time the Sanánwán Tahsíl had been added to the district. His assessments for each tahsíl were as follows :—

	Rs.
Muzaffargarh	2,20,592
Alípur	1,41,042
Sanánwán	1,08,660

In Sanánwán a substantial reduction was again made. In Alípur the result of this revision was to put back the jama to the amount at which it stood before Captain Graham's revision. In Muzaffargarh a substantial reduction was given on the jama of the first summary settlement. This revision was followed by the first distribution of the jama and preparation of khewats that had been made in the district. This work was done by Sohan Lál, Extra Assistant Commissioner, and is known as the khewat of 1923 Sambat. The third summary settlement would have worked well but for three things. The inundation-canals irrigate

* Deputy Commissioner's No. 356, dated 8th July 1859.

210,000 acres of cultivation. The best crops depend on them. Our immediate predecessors paid the closest attention to the canal arrangements. From annexation to 1876 the clearance and repairs of the canals were wholly neglected. The result was that the cultivators were impoverished and the revenue has suffered. In round numbers 120,000 acres of cultivation are dependent on sailab. Enhancements were largely made on account of river action, but remissions were sparingly given for deterioration from the same cause. In short, the revenue administration in the canal and in the sailab country, which form nine-tenths of the cultivation of the district, was about as bad as it could be. This management has been now corrected permanently, and only requires to be noticed here. Illegal and unreported methods of coercion were generally practised, and the result has been to make the people as bad revenue payers as the tahsíldárs bad collectors. The mode of collection shall be closely watched, for the tahsíldárs show signs already of reverting to their own illegal practices. Another fault was, that no official ever understood that a new distribution of the revenue could be made. The working of the third summary settlement showed that the district was one that required more active revenue administration than most, and that neglect would produce very disastrous results. A local disaster was the series of destructive floods that occurred from 1871 to 1874 in the Sanánwán Tahsíl. The regular settlement of the district began in 1873. An account of it will be given in the next chapter.

Tenures.
Superior proprietors.

17. The tenures of the district are so inseparably connected with the former revenue administration that an account of them suitably follows here. The mutual relations of the classes living on the land have been formed by the revenue system of the Sikhs and British. The system has not adapted itself to the existing state of things, but has distinctly and abruptly interfered with it. At the head of the agricultural system is a large body of what are now called superior proprietors. Most of these are the descendants of tribes who came here for grazing at a time when the country was depopulated. With or without the leave of the Government of the time being, they occupied tracts, the boundaries of which were not very clearly defined. Of this kind are the Tháíms near Muzaffargarh, the Parihárs of Kot Adú, the Khars of the Thal, the Chajrás and Damars in Alípur, and other tribes still occupying distinct tracts of country. Other superior proprietors are the descendants of jagírdárs and former governors or officials who lost their position in troubled times, but were able to retain a right to a small grain fee in the tract over which they once exercised power. Others are the descendants of Makhdúms and other holy men who formerly held land free of revenue, but whose rights have been circumscribed by successive governments. The superior proprietors above described were form the first in the habit of introducing settlers to till the lands, but the great development of the settler class was due to Diwán Sáwan Mal. When he took the farm of the revenues of this district from Ranjit Singh, he saw at once that cultivation could not be restored or increased by the representatives of former governors, holy men, broken down jagírdárs, and loosely connected tribes whom he found in nomir

possession of the lands. He therefore encouraged strangers and Hindu capitalists to sink wells, dig canals, and cultivate the lands of the nominal owners. At the same time he secured to the latter a share of the produce, generally half a sér in each maund by weight, or one pai* in each path where the crops were divided by measure. In some cases the old proprietors were strong enough to levy an institution fee, when a settler was located on their lands. In this way two distinct classes of proprietors were formed :—

(1.) The old possessors who were known as zamíndárs and mukadáms, and in modern official language Malikán Alá and Talukdárs.

(2.) The settlers, formerly called riáyá, and chakdárs, and now generally Malikán Adná. The chakdár was so called from the wooden frame on which the masonry cylinder of a well is built. The name was meant to express that the chakdár had acquired his rights in the land by his having sunk the well. For this reason he was also called the silhdár or owner of the bricks of the well.

The superior proprietors claim to be owners of all unappropriated land, and entitled to a small share of the crop produced in the appropriated land. The Malikán Adná are full proprietors of the land in possession, subject to the payment of the share of the old proprietors, and are not liable to eviction on failure to pay it, and are entitled to introduce tenants without reference to the superior proprietors. Since annexation the fortune of the superior proprietors have varied. In some villages the tenure has disappeared. In others, especially where little unappropriated land was left, the lambardárship, which was a novelty, took the place of the superior proprietary right. In Sanánwán the tenure survives in every village, because a record of the superior proprietary right was made and the grain fee was commuted into money at the rate of Rs. 1-12-0 per cent. on the land-revenue. In Muzaffargarh and Alípur no such arrangement was made, and the tenure has disappeared in the majority of villages. In Muzaffargarh there are 411 villages. In 139 there are both superior and inferior proprietors. In 272, superior proprietorship has disappeared, and the inferior proprietors have become absolute. In Alípur there are 177 villages. Superior proprietorship has survived in 48 only. The superior proprietors, as such, have no right to interfere in the management or the cultivation of the appropriated lands of a village. The settlement has in no case been made with them, except where they are also inferior proprietors. Their rights are restricted to receiving their fee in grain or cash, and to disposing of the unappropriated waste in the village. The name of the superior proprietary right is zamíndárí, mukadamí, or milkiyat álá. The share of the produce is "hak zamíndári," hak mukadamí and malikáná, or more often the specific rate at which the share is fixed, *e. g.*, adh-será man and pai path are used instead of the generic word. In Sanánwán it is called satán pawán, or the seven quarters of a rupee which equal Re. 1-12-0, the rate at which it is paid. The institution fee is called jhúrí sar-o-pa pag and lungí.

The Mooltání Pathána.

18. One set of superior proprietors was formed by the direct action of the British Government. They are the persons known here as the Mooltani Pathán.

* A pai is a measure of grain containing about 16 seers by weight. A path is a measure equal to about 32 maunds. 64 pais make a path.

Under the Afghán governors of Mooltan a number of Patháns had settled in this district. They enjoyed grain allowances which were given as a deduction* from the mahsúl or government share of the produce. When the Sikhs in 1818 took Mooltan, the Patháns fled the country. In 1848 they joined Major Edwardes and rendered services in his operations against Mulráj. When the country had become quiet, the Patháns claimed restoration. The rules of limitation were set aside in their favor, and with its letter No. 1975, dated 30th September 1850, the Board of Administration prescribed rules "for the regulation of the trial of suits instituted by the Patháns of Mooltan for the recovery of their ancestral rights," of which the following is an extract:—

Rule 2. "To establish the right of a party to sue, irrespective of the Statute of Limitation on the merits of his claim to re-possession of zamíndárí property, he must prove that he was a Mooltani Pathán present with Major Edwardes' force, or that he is a member of a family of Mooltani Patháns some of the members of which family were present with Major Edwardes' force."

In pursuance of these rules, cases continued to be heard up to December 1852, and Patháns obtained decrees for kasúr in the villages of Jalálábád, Piplí, Ran, Kangan, Mahrá Faráz, Wáfádárpúr, Mahra Nasheb, Ghazanfargarh, Doábá, Jarh, Latukran, Langar Sarai and Lálpúr. The measure can only be considered disastrous. It was not observed at the time that under the Pathán governors this kasúr was paid as a deduction from the revenue, and that if the Patháns were to be restored under the altered state of things brought about by a cash assessment, the more just method was to have given them an allowance from the revenue and not to have imposed a new grain-cess on the cultivators. In 1853 the Deputy Commissioner reported that the exercise of the rights of the Patháns who recovered kasúr paralyzed the industry of the cultivators, and again in 1859 he said that the restoration of the Patháns to kasúr rights was impolitic. The failure to define those rights has allowed them to encroach on the inferior proprietors and to ruin them. He instanced villages that had been ruined in this manner. The result was, that in some villages the Patháns succeeded in ousting altogether the inferior proprietors; in others they reduced them to the position of tenants-at-will. Where the inferior proprietors were too strong to be interfered with, beyond the enforced payment of kasúr, the Patháns became superior proprietors.

Inferior proprietors.

19. The way in which the status of inferior proprietor was formed has been described. The inferior proprietors in a village have usually no common ties of clanship. They are a miscellaneous body, each member of which was originally introduced either by the government or by the superior proprietors. In villages where superior proprietary right exists, the inferior proprietor is usually entitled only to the land occupied by himself or his tenants. The unappropriated waste belongs to the superior proprietors. The inferior can graze his cattle in it, subject to the tirní

*NOTE.—This deduction was called "kasúr," which, it should be noted, is different from the "kasúr" which is also the name for the particular rent of the inferior proprietors.

rules, but cannot cultivate it without leave of the superior. In other respects tenure of inferior and absolute proprietors differs only in that as regards the latter the superior right has ceased to exist. The formation of new superior proprietorship where it has ceased to exist has of course long been impossible, but new inferior and absolute proprietors are constantly being made by the contract known here as adhlapí or adlopí. A proprietor allows a third person to sink a well in his land on payment of a fee, and to bring the land under cultivation. The person so sinking the well becomes proprietor of half the land brought under cultivation. If an inferior proprietor cultivate through tenants, he receives a grain fee which is called "lichh" on the Indus, and "kasúr" on the Chenab. The rate varies with locality and in consequence of contract, but it is almost invariably one-seventeenth of the gross produce and is known as solh satárí. Under former governments the share taken by the State was the mahsúl. Under our Government the person who pays the land-revenue receives the mahsúl. This person may be by agreement the superior proprietor or the tenant, or even some person unconnected with the land, but as a rule the inferior proprietor pays the land-revenue and receives the mahsúl. For the purposes of settlement he has been presumed always to pay the land-revenue and to receive the mahsúl, and his profits have been assumed to be the mahsúl, plus the lichh or kasúr.

Inferior proprietors classified.

20. From the mode in which inferior proprietorship was formed, *viz.*, by settling individuals to till the land, it follows that most villages are mere collections of wells grouped together for revenue purposes, but not really knit together in any way. When they are classified according to the usual nomenclature, the following is the result :—

Tahsíl.	Zamíndárí.	Pattidárí.	Bhayáchárá.
Muzaffargarh	30	9	378
Alípur	8	1	167
Sanánwán	27	1	110
Total ...	65	11	655

Tenants.

21. The tenants in this district are chiefly of two classes—

Mundhímár tenants. Bútímár tenants.

(1.) Those who have, by clearing the jungle and by bringing land under cultivation, acquired a permanent right to cultivate. These are called Mundhímár or Bútímár, and have as a rule been recorded at regular settlement as tenants with rights of occupancy.

(2.) Those tenants who have been put in, with or without a term being fixed by proprietors, to cultivate land already cleared and fit for crops. These are called charháyat. They have been usually recorded as tenants without rights of occupancy. Tenants were classified according to the language of the Tenancy Act. Land is still so abundant that the occupancy status has no attraction for tenants. They prefer not to be tied to the land, and to be able to change their cultivation when they like. In the Sanánwán Tahsíl, applications by tenants not to be recorded as having rights of occupancy were common, though they were by custom entitled to permanent possession. The share of the crop received by the tenant is called "rahkám." Tenants are eagerly sought after, and as a rule free from any attempt on the part of the landlord to extort from them. Every effort is made to retain them. Some landlords study to get their tenants indebted to them in order to keep a hold on them.

Exceptional forms of agricultural status.

22. In addition to the usual forms of superior and inferior proprietor, and mundhímár, bútímár and charháyat tenant with their respective shares in the produce, there are certain exceptional forms of agricultural status, rent and interest or mortgages, which require to be described.

Mahsúlkhor.

It often occurs that an inferior proprietor, from indolence, or inability to keep accounts and manage for himself, agrees with some third person, usually a village shopkeeper, that the latter shall receive the mahsúl, pay the Government revenue out of it, and keep the profit or bear the loss. Such a person is called a mahsúlkhor. This arrangement was very common before the regular settlement, and still exists.

Lichháín.

Lichháín means a cultivator who tills his land with borrowed bullocks, and pays the owner of the bullocks half of the rahkám, or cultivator's share.

Anwahndá.

Anwahndá literally means "without working." Hence it means that share of the produce which a person connected with land receives without working, or foregoes because he has not done work which by custom was incumbent on him, *e. g.*, A lends B money, and instead of getting interest in cash, receives a share in the produce. That share is called anwahndá, because A gets it without working for it. When a landlord has cleared the jungle and brought land under cultivation himself, and then gives it to a tenant to cultivate, he takes an extra share of the produce, because he has himself done the work which the tenant should have done. This share is called anwahndá, because the tenant did not do the work of clearing. The word anwahndá of itself has no meaning without the history of the manner in which it accrued. When a suit is brought for

anwahndá without details, it should always be returned to the plaintiff in order that the grounds on which it is claimed may be entered in the plaint. Until this is done the plaint discloses no cause of action.

Lichh.

Lichh in its ordinary sense means the due of the inferior proprietor, and is synonymous with kasúr as already described. But lichh also means the interest due on a mortgage of land when the mortgagor continues in cultivating possession, whether it be paid in grain or cash. Another kind of lichh is valwín lichh, *i.e.*, "returned lichh," which is also called khutí. When land is mortgaged to a Muhammadan, and the conditions of the mortgage are that the mortgagee shall cultivate the land, he agrees to pay a small share of the produce to the mortgagor. This share is called valwín lichh or khutí. The use of lichh to mean interest, and the practice of valwín lichh, are devices of Muhammadans to evade the charge of receiving interest, and are now in vogue among Hindus as well.

Lekhá mukhí mortgages.

Lekhá mukhí is the name of a kind of usufructuary mortgage in use. A debtor makes over his land to a creditor until the debt is paid from the produce of the land, or the debtor retains the cultivation and agrees to pay the proprietor's share to the creditor. In both cases the creditor charges the interest of the debt and expenses against the debtor, and credits him with the produce of the land or with the proprietor's share, until the debt is liquidated.

Chapter VII.—THE SETTLEMENT.

Sketch of settlement operations.

1. The settlement began in the hot weather of 1873. Notification 683, dated 5th May 1873, issued under section 11, Act XXXIII of 1871, declared the district to be under settlement. Mr. E. O'Brien was appointed Settlement Officer; Mír Nisár Alí, Extra Assistant Settlement Officer; and Kázi Ghulám Murtázá, Sheikh Subah and Munshí Bhagwán Dás, Superintendents of Settlement in Alípur, Muzaffargarh and Sanánwán, respectively. Mr. E. O'Brien was gazetted a Magistrate of the 1st class by Notification 1704, dated 1st May 1874. Mír Nisár Alí was transferred, and Kází Ghulám Murtázá was appointed Extra Assistant Settlement Officer by Notification 3532, dated 24th September 1875, and was made a Magistrate of the 2nd class by Notification 4607, dated 9th December 1875. By Notification 1042, dated 9th July 1873, Mr. E. O'Brien was invested with the powers of a Deputy Commissioner for the appointment, punishment and removal of patwáris and kanúngos. By Notification 26, dated 6th January 1880, the record of rights for Sanánwán was directed to be handed over to the Deputy Commissioner, and

by Notification 954, dated 4th October 1880, similar orders were passed for Alípur and Muzaffargarh Tahsíls. Establishments were collected, and the patwáris trained only in time to make a thorough start in September 1873. Measurements were completed in the three tahsíls from March to June 1875. The reports on assessment rates were submitted and sanctioned on the following dates :—

Tahsíl.	Date of submission.	Date of sanction.
Sanánwán	2nd February 1877	27th June 1878.
Alípur	17th September 1877	18th June 1879.
Muzaffargarh	15th July 1878	27th September 1879.

The settlement was finished in July 1880, thus taking as nearly as possible seven years.

The measurements and their results.

2. The scale of linear and square measure on which the measurements were made is that in use in the district, and is a convenient one, because it corresponds with the English measures.

Linear Measure.—2 paces (5½ feet) make 1 karam, 12 karams make 1 jarib. A karam square is sarsáhi, which gives the unit of the local square measure.

Square Measure.—9 sarsáhís = 1 murla = 1 pole. 20 murlas = 1 kanal = ½ rood. 4 kanals = 1 bigha = ½ acre.

It was soon seen that the classification of land for assessment purposes in this rainless district must be based on the different kinds of irrigation, and not on soils. Though the latter vary in fertility, still the great salient differences in productive power depend on the modes of irrigation. Thus the large area dependent on the river inundation produces only one crop in the year, and that a rabbí crop. The land irrigated by canals alone produces only one crop, and that a kharíf crop. The land irrigated from wells assisted by canals can grow two crops in the year, and those of the richest quality, or such crops as sugarcane and cotton which occupy the ground during both seasons. The classification adopted was therefore as follows:—

(1). Land irrigated by sailáb.
(2). Land irrigated by sailáb and well (chahi sailábá).
(3). Land irrigated by well and canal (chahi nahri).
(4). Land irrigated by well alone (chahi).
(5). Land irrigated by canal flow (paggu).
(6). Land irrigated by canal lift (jhalári).

The cultivated area of the district according to the settlement measurements is as follows:—

Tahsíl.	Artificially irrigated by well or canal.	Irrigated by sailáb.	Total.
	Acres	Acres	Acres
Muzaffargarh	126,709	43,477	170,186
Alípur	71,652	49,660	121,312
Sanánwán	82,210	25,559	107,769
Total ...	280,571	118,696	399,267

The culturable waste is 952,870 acres. The area recently thrown out of cultivation is 61,842, and unculturable waste 281,725, acres. The measurements were the most interesting part of the settlement, and were, I think, very correctly done. The patwáris had been well trained during the hot weather of 1873. A reserve was formed by starting surveying classes at the larger schools from which a constant supply of residents of the district were ready to take the place of incapacitated patwáris. Sons of some of the lambardárs and zaildárs joined the classes and acquired enough knowledge to be useful to them after the settlement, when annual measurements of the whole cultivated area of the district have become part of the revenue administration. The superintendents were active in checking the survey, and had not become wearied by office work.

Rakh demarcation.

3. As a part of the measurements, the Government rakhs were demarcated, and what had been a sore question since 1860 was finally decided. The demarcation of village boundaries was made, as has been stated, in 1856. It included within village boundaries all the waste land in the district. In 1860, Mr. Cust, then Financial Commissioner, in his letter No. 3342, dated 24th July, declared the boundaries open to revision. In 1861, in order to carry out this order, the Deputy Commissioner with a pencil marked off, on the revenue survey maps, pieces of land shown as waste, to form Government rakhs; but no demarcation on the spot was made till 1879, when Sohan Lal, Extra Assistant Commissioner, was appointed to carry out the work. This demarcation followed rigidly the pencil lines of 1861, and the result was that much cultivated land, pucka wells, village sites, graveyards, public roads, and even canals, were included in the rakhs. In 1874 a re-demarcation was ordered. This has been carried out, and sanction was received to it in the correspondence noted in the margin. The area of rakh land is 311,554 acres. The Government rights in these have been secured, in almost every case, unincumbered by the inclusion of popular rights. The rakhs have been excluded from village boundaries and made into new rakh villages. A regular settlement record has been made for each rakh, the property of Government. No claims to rights of entry on the retained

Secretary to Government No. 948, dated 20th August 1877, to Secretary to Financial Commissioner; and Secretary to Government No. 685, dated 1st June 1878, to ditto.

rakh, for any purpose except a few old rights of way, were either made or admitted. Where rights of way existed, the roads have been shown on the rakh shajra, and have been mentioned in the wajib-ul-arz. If the road was a main road, and the right of way public, this has been recorded, and if the right of way was restricted, the persons entitled to use it have been mentioned.

Record of right in rakhs under the Forest Department.

4. Besides the settlement record of each rakh, a record has been prepared of the kind described in the correspondence attached to Financial Commissioner's Circular memo. $\frac{S}{92}$ of 1876, for each of the rakhs under the control of the Forest Department, and forwarded to the Assistant Conservator of Forests, Mooltan. Trenches and boundary pillars have been made round all the rakhs. At the point where a rakh and two or more other villages meet, the usual trijunctional platforms have been erected. The records above referred to were prepared in accordance with departmental orders before the passing of the Forest Act. If it is thought necessary to go over the ground again in accordance with the procedure laid down in that Act, they will form a good guide for the Forest Settlement Officer. Draft rules for the future management of the rakhs under the control of the Deputy Commissioner were submitted with my letter No. 134, dated 13th September 1879, to Settlement Commissioner, but no orders have yet been received on the subject.

Effect of the demarcation of rakhs on tirni revenue.

5. Before the re-demarcation of rakhs, tirni was levied in those villages in which rakhs existed. Those villages in which there was no rakh escaped paying anything for their cattle. At the regular settlement, all village waste, including of course released rakhs, was assessed for the term of settlement with a fixed assessment as grazing land, and it was arranged in the draft rules referred to before that the grazing in the retained rakhs should be leased annually. Under the former system, the tirni income from rakhs had varied from Rs. 23,888 to Rs. 43,124. Under the arrangements made at the regular settlement the grazing land of the district has been assessed as follows:—

			Rs.
Muzaffargarh	...	...	9,488
Alípur	...	...	14,420
Sanánwán	...	...	9,480
	Total	...	33,388

In 1880-81 the grazing in the rakhs under the control of the Deputy Commissioner sold for Rs. 3,491.

Rakhs under the Forest Department.

6. There is a large area of rakh land under the Forest Department. Since 1870 the officers of that department have been making selections of rakhs to be managed under their control, but no final

decision has been reached at present (1881). The following is the area of rakhs under the

	Acres.
Forest Department	... 48,787
District authorities	... 262,767
Total	... 311,554

Canal administrations, past and present.

7. Under former Governments the annual clearance and repairs were usually effected by levying so many laborers per well or per yoke of oxen. Fifty or sixty bighas of waste land were considered equal to a well for the purposes of this levy. When the work was unusually heavy, the irrigators subscribed cash to engage hired laborers. Occasionally the Government of the day gave money assistance for the execution of works, and recouped itself by levying a share of the crop at harvest. Under the Bahâwalpur Government a cess of one pai of grain per path was levied for clearance and excavation of the canals. Under Sâwan Mal, grants of money were made to assist the excavation and clearance. The kardars were responsible for the work being efficiently done. They had unlimited powers, and compelled attendance of the laborers by force, and punished shirkers. Under their administration the irrigators rarely failed to supply the required amount of labor. Judging from old accounts, from the greater extent of canal cultivation, from the number of disused canals, and from the diminished length of the remaining canals, the canal administration under former Governments was closely supervised, and especially under Sâwan Mal was very effective.

Canal administration under British rule.

8. From annexation to 1857 the administration of the canals may be described as absolute neglect. The old system of active interference on the part of Government was withdrawn, and the canals were left to get on as best they could. In 1858, Mr. Henderson, Deputy Commissioner, laid down an efficient scheme of canal management, which, with few changes, has stood its ground to this day. Its author, however, did not contemplate with what inertness it would occasionally be worked. A record of facts regarding each canal was prepared. The responsibility of the irrigators for supplying labor for the annual clearance and repairs was asserted and enforced by the imposition of a fine on those persons who absented themselves from the work. The fine was first 2 annas per head per day, then progressively 4, 6, 8 and 12 annas. In 1874 it was reduced to 8 annas, at which it still remains. On each canal a committee of management, the members of which were called sarpanches, was chosen from among the irrigators, and one or more water-bailiffs, called mimhars, were appointed. Their duties were to summon the laborers for the clearance, and to distribute the water when the canals were running. A darogha was appointed for each tahsîl, and paid from the absentees' fine fund. The sarpanches were remunerated by the remission of part of the quota of labor which they were bound to supply. The mimhars were paid by the

irrigators. The mode of payment differed. On some canals they received from Rs. 5 to Rs. 7 per month in cash, and two topas=8 sérs of grain per well at harvest. On others they received four or five topas per well at harvest, and no cash allowance. The procedure for effecting the annual clearance and repairs was as follows. Each year when the canals ceased to run, the sarpanches and mimhars, with the darogha, inspected each canal. They decided how many laborers were wanted for the clearance, and how long the work would take, and then submitted a petition through the tahsíldár, saying that they wished to supply so many laborers for such and such a period. When the Deputy Commissioner's sanction had been obtained, a muharir and one or more chaprasís were appointed for each canal, and the number of laborers fixed on for the canal was distributed in proportion to the land-revenue paid by each irrigator, so that each person knew the number of laborers that he had to supply. Then a proclamation, vakárá, was issued by the tahsíldár through the sarpanches, fixing the date for the clearance to begin, which was generally in December. The clearance was done in two ways. All the laborers began at one end of the canal and worked through to the other. This mode is called súrh. The other mode is as follows. The canal was divided into lengths, and each village cleared the length allotted to it. This mode is called dak. During the clearance the muharir kept up a roster of the laborers present and absent, and at the end of the work each irrigator who had not supplied his quota of laborers was debited with the number of laborers which he had not supplied at the rate of fine which was then current. The fines, as well as income from the sale of grass and wood from the canal banks, were credited to a fund devoted to the general improvement of the canals. The fines and the fund are termed zar-i-nagha, or, in common parlance, nángá. A gang of laborers is called chher, which also means a drove of cattle, and each member of the gang is called a chherá. If, while the canals were running, any emergent work was required to be done, such as mending the bank which had burst, or clearing the head which had silted up, additional laborers were called out. Such laborers are called the chikar chher, or "mud gang," because they have to work at a time when the clay has been turned into mud by the canal water. It speaks well for the readiness with which the people are ready to help one another that it is not found necessary to levy zar-i-nagha to ensure attendance at the chikar chher. From 1858 to 1878 a person wishing to obtain irrigation for land that had not hitherto received it, or to cease to receive canal water, had to obtain special permission, which was only granted after inquiry. In practice, it was easy enough to be brought on the roll of irrigators, but almost impossible to get removed from it, and, consequently, from the obligation to supply labor. One of the worst abuses connected with the management of the canals was, that men were kept on the labor list for years after they had ceased to obtain water, and this though the failure of water arose from causes beyond their control. In 1878 this system was changed, the irrigated area was measured, and the number of laborers distributed over the irrigated area only. The theory that the labor was supplied voluntarily was

could get the annual clearance
until he had got a writ-
allowed to supply so many like-
and wanted to get great work
He also knew that unless the
found it difficult to collect his revenue.
On the other hand, the irrigators were
and did their best to avoid supplying
between these rival wishes occurred. It is
the committee of management was looked
the subalterns' requirements as regards
started well, but it was badly worked
the subalterns had not the time or the
which got worse and worse. They
cut and consequently decreased
The level of their beds having thus
which was prevented from entering the
was long, as when they were
had reached their worst, a
was specially appointed
possible without professional
In March 1880 Government
Muzaffargarh canals into a Pub-
was appointed Executive

describe the arrangements made for the
management of the canals by the Pro-
Canal officers. The number of labor-
required to execute the annual clearance
and repairs has been fixed for the next five
the number of laborers fixed has been
of land revenue, and is recorded in the
village. The penalty for non-
per man per day, and has also been
September the canal-irrigated land
and the results will be communicated
in the following form :—

Government land for S. F. 1297 by Mauza.

Engineer will then distribute the number of laborers
l over the area irrigated in the preceding year, and
rigator of the number of laborers which he will
he clearance and repairs, and of the time when the
)uring the clearance, the roster of attendance will be
r as before, and as soon as the work is finished the
will prepare a statement for each village showing
n each irrigator on account of non-attendance fines.
sts to the Deputy Commissioner, who will collect
rabbí instalments in June and July.

10. A record of each canal has been made at the settlement. It consists of the following papers :—

he canal on a scale of 240 karams, or 1,320 feet, to

'he canal

ts branches

(*a*) in use (karia and kassi),
(*b*) disused (khandar).

The estates irrigated from the canal, with their boundaries.

Chhabs, *i.e.*, previous dams for raising the level of the water.

Jhalárs.

oundaries of the villages, irrigations, and the village
The irrigating villages, the estates, and the branches
he map, and the numbers correspond with the num-
strative paper of the canal.

nistration paper divided into the following heads :—

History of the canal.

List of villages irrigating.

List of the branches, with the history of each branch and an account of how the annual clearance is made.

Dams (chhabs)—who may erect and with whose leave.

Jhalárs.

Annual clearance and emergent works—how executed in former times and at present.

the orders conveying sanction to the assessment reports, it has been decided that the whole of the revenue assessed on land irrigated from canals
hirds of that assessed on land irrigated by canals and
to the Canal Department. This amount will
nt will be approximately Rs. 2,25,000. In

order to make the revenue assessed on canal lands more elastic, it has been arranged to grant remissions of revenue in case of failure of the canals, and to allow the State to participate in the profits resulting from the spread of irrigation. To effect this, the revenue assessed on canal lands has been divided into—

Fixed revenue.
Remissible revenue.

Fixed revenue is that which would have been assessed if the canals had not existed; remissible revenue is that which the existence of the canals has produced. In the tahsíls of Sanánwán and Alípur, and in the greater part of Muzaffargarh, the remissible revenue has been assumed to be the whole revenue assessed on lands irrigated by canals alone, and half the revenue assessed on lands irrigated by wells and canals. In a small part of the Muzaffargarh Tahsíl, one-fourth of the revenue assessed on land irrigated by both canals and wells is assumed to be remissible. In case of total failure of a canal to supply water, the whole of the remissible revenue will be remitted. In cases of partial failure, the Deputy Commissioner will decide the proportional amount to be remitted. In order that Government may share the profit of extended irrigation, it has been made a condition of the settlement that land newly coming under canal irrigation shall be assessed with a water-advantage rate, though it was not assessed at settlement. This rate will be levied only on lands actually irrigated in the year for which it was charged. The rate has been fixed at 6 annas per acre in Sanánwán and Alípur. Eight annas per acre was proposed for Muzaffargarh, but no orders have yet been received on the subject. With his letter No. 234, dated 29th May 1879, the Settlement Commissioner submitted draft rules to be issued under the Canal Act, but no orders have been received regarding them, nor have any rules been issued.

Zaildárs.

12. Zaildárs were appointed in accordance with the orders conveyed in Settlement Commissioner's Circular No. 66 of 2nd September 1873, and the arrangements made were reported in Settlement Officer's letter No. 338, dated 6th December 1874. They are remunerated by a deduction of one per cent. from the land revenue, and by special ináms. The following statement shows the result :—

Name of Tahsíl.	Number of zails.	Number of zaildárs.	Amount of pay at one per cent.	Amount of ináms.	Total.
Muzaffargarh ...	19	22	2,719	1,310	4,029
Alípur ...	21	24	1,693	1,180	2,873
Sanánwán ...	11	13	1,228	820	2,048
Total ...	51	59	5,640	3,310	8,950

Many of the zaildárs have rendered good service to Government gratuitously for a long time. As stated by Mr. Lyall in his review of the Alípur Assessment Report, "the good effect of the system is more apparent in Muzaffargarh than in almost any other district. A link of the kind between the people and district officials was particularly wanted here."

Patwáris and kanungos.

13. In order to carry out the fluctuating system of fluctuating assessment of sailábá and canal lands, and the annual measurements of canal lands which has been introduced at regular settlement, a strong kanungo and patwári establishment was required. Two náib-kanungos have accordingly been sanctioned for each tahsíl in addition to the kanungo already appointed in each tahsíl. There is a sadar kanungo on Rs. 60 for the district. In the orders on the assessment reports, 6 per cent. was sanctioned as the rate of the patwáris' cess in Sanánwán and Alípur, and 6¼ in Muzaffargarh; but, as directed by the Financial Commissioner in his review of the Sanánwán report, these rates have been regarded as a maximum, and in making the detailed arrangements of circles the rate has been kept as low as was consistent with efficiency and the proper remuneration of the patwáris. The following statement shows the result :—

Tahsíl.	Number of patwáris' circles.	Rate of patwáris' cess on the jama.	Amount of pay.	Remarks.
			Rs.	
Muzaffargarh	42	6 p. c.	6,372	There are 87 circles and 87 patwáris in this tahsíl.
	1	5¼ „	199	
	25	5 „	4,026	
	2	4¼ „	396	
	9	4 „	1,364	
	8	3¼ „	1,353	
Total ...	87	...	13,710	
Alípur	51	6 p. c.	8,903	There are 58 circles and 60 patwáris in this tahsíl.
	1	5 „	223	
	1	4¼ „	172	
	3	4 „	471	
	2	3 „	318	
Total ...	58	...	10,087	
Sanánwán	19	5¼ p. c.	3,847	There are 39 circles and 44 patwáris in this tahsíl.
	20	4¼ „	3,084	
Total ...	39	...	6,931	
Grand Total	184	...	30,728	

All the patwáris know the Persian character. No other character is of use in this district. Dewanagri is unknown, and Kiraki is useless, for it can be read by few except the writer. It is to be hoped that in making future appointments this will be remembered, and also the advisability of appointing residents of the district. It is a common saying that a foreign patwári takes bribes with both hands, but a native with only one.

Native place of patwáris.

Of the 191 patwáris in the district—

120	are	natives	of the	Muzaffargarh District
35	„	„	„	Mooltan „
5	„	„	„	Jhang „
2	„	„	„	Dera Gházi Khan „
29	„	„	„	other districts

Of the 29 natives of other districts, the greater number have formed connections in this district and are as good as residents.

Record of rights.

14. The tenures have been described in Chapter VII. There was no difficulty in embodying the facts relating to them in a settlement record. All the cultivated land in the district is divided into compact little estates called well if irrigated by well, or well and canal, patti if irrigated by canal alone, and sér if irrigated by sailáb alone. This division made the formation of the record of rights exceptionally easy, for when the shares of the landlords in the land, and tenants in the cultivation, had been ascertained, a short history of each estate supplied every fact that it was necessary to note about the estate. At the same time the small area of each estate and their number made the formation of the record very laborious. In his letter No. 601, dated 5th January 1874, the Settlement Commissioner suggested that it might be possible to do without some of the papers, and that the muntakhab and nakshah chahát should be amalgamated. In Settlement Officer's letter No. 180, dated 15th July 1875, proposals were made to make the muntakhab by wells, and it was shown that it was a waste of labor and paper to make out a separate nakshah chahát, and that besides there was the risk of discrepancy which copying entries from one paper to another involves. In his Secretary's No. 4773½, dated 9th August 1875, the Financial Commissioner approved of the proposal, which afforded substantial relief to the Settlement officials. The original occupiers described in Chapter VI, paras. 16 and 17, were recorded as superior proprietors, the chakdárs as inferior proprietors, and the tenants were classified under the old names of "máurúsi" and "ghair máurúsi." The one novelty in the settlement record is a khewat of date-trees. This shows the following facts:—

1. The owners of the trees.
2. The owner of the land in which the trees grow.
3. Name of the well in which they grow.

4. Khasrah numbers in which they grow.
5. Number of trees in detail :—
   (*a*) Female.
   (*b*) Male.
   (*c*) Eunuchs.
   (*d*) Young trees.
6. Rate of assessment per tree.
7. Amount assessed, and cesses.

The administration paper.

15. Besides the provisions of the administration paper obviously necessary, certain matters which were rendered necessary by the arrangements made at settlement have been recorded and require notice. It has been provided that where land unirrigated by canals and unassessed at settlement comes under canal irrigation during the term of settlement, ábiána shall be charged at 6 annas per acre in Alípur and Sanánwán, and at 8 annas in Muzaffargarh as long as it continues to receive canal water. The obligation to supply chher labor according to long-standing custom for the annual clearance and repair of canals has been entered in the administration paper, and the conditions under which canal revenue will be remitted have been recorded as stated in para. 11. When Government released the rakhs to the people, as described in para. 3, it retained the ownership of the timber growing in the land released, but allowed the people to cut wood for domestic and agricultural purposes. This reservation has also been entered in the administration paper. It was one of the faults of former revenue administrations in this tahsíl that it was not considered within the bounds of possibility that a re-distribution of the jama within a village could be made. Men whose land fell out of cultivation had still to pay for that land. Persons who brought fresh land under cultivation were allowed to enjoy the produce revenue free. To prevent the recurrence of this state of things, it has been provided that a re-distribution may be made either when the proprietors wish it, or when the Deputy Commissioner orders it to be made. In villages of which the assessment is fluctuating, all the terms of the assessment as it affects the village have been clearly and simply entered.

Records of general customs.

16. Three records of general customs have been made :—

1. The Riváj-i-ám, or statement of usages actually existing in each tract. A copy is appended to the administration paper of each village. Under the orders of the Settlement Commissioner, contained in his Circular No. 35, dated 3rd May 1879, it is stated in the heading of the Riváj-i-ám that its contents are not to be presumed to be true like entries in the record of rights under Section 16, Act XXXIII of 1871, and that its object is to assist the civil courts.

2. A statement of customs regarding alluvion and diluvion on the banks of the Indus.

3. A statement of customs regarding alluvion and diluvion on the banks of the Chenab.

Cesses.

17. The cesses payable are—

Patwári's	cess 3	to 6 per cent.
Lambardár's	„ 5	per cent.
School	„ 1	„
Road	„ 1	„
Dák	„ ½	„

Term of settlement.

18. In para. 7 of Punjab Government letter No. 652, dated 19th May 1879, the term of settlement was fixed at twenty years in Sanánwán and Alípur. No orders have yet been passed regarding the Muzaffargarh Tahsíl.

Dates of instalments.

19. The dates for paying the instalments of land-revenue are—

Rabbí ... 1st June, 1st July.
Kharíf ... 1st December, 1st January, 1st February.
Date instalment, 15th August.

Cost of settlement.

20. The cost of the regular settlement has been as follows :—

From Imperial Funds	... Rs.	3,97,450
Settlement fees	... „	2,74,318
Total Rs. ...		6,71,768

The assessment.

21. Before describing the assessment it will be well to present in a collected form the facts which bear directly on the revenue. We have a district in which the rainfall is so slight that no cultivation depends on it. Of course a shower improves crops already in the ground, but the prospect of rain or no rain does not enter into the calculations of the farmers. Along the banks of the river and extending for a considerable distance inland, is a tract the cultivation of which depends on sailáb alone or sailáb assisted by wells. Inside that tract is another, the cultivation of which is carried on by means of wells and canals. Again, in the inland north part of the district is a country where neither sailáb nor canals reach, and in which agriculture is carried on by wells alone.

Tenants.

22. The following statement shows the number of tenants and the area cultivated by them. The trae of mahsúl prevailing is also given :—

Tahsil.			Number and area cultivated by Tenants.				Detail of Tenants paying in kind alone.						Total cultivated area.
							Mahsul.						
			Paying in cash alone.	Paying in kind alone.	Paying in cash and kind.	Total.	½	¼	⅛	⅖	⅕	All others.	
Muzaffargarh	Number	...	354	5,460	5,996	11,810	1,783	2,493	296	815	...	73	...
	Area	...	2,899	40,649	25,839	69,387	17,967	15,858	2,507	3,874	...	443	170,186
Alípur	Number	...	55	10,364	2,274	12,693	105	6,359	5,787	134	...	253	...
	Area	...	165	44,500	9,638	51,303	194	26,309	20,361	785	...	3,489	121,312
Sanánwán	Number	...	9,698	2,597	...	12 295	13	786	1,545	59	145	4,084	...
	Area	...	36,486	11,618	...	48,104	58	3,321	6,844	334	475	15,717	107,769
Total	Number	...	10,107	18,421	8,270	36,798	1,901	9,638	7,628	1,008	145	4,410	...
	Area	...	39,550	96,767	35,477	1,68,794	18,219	45,488	29,712	4,993	475	19,649	399,267

Prices.

23. Statistics of prices have been collected from 1854 to 1877. The following statement shows the variations in prices as regards the eight crops which occupy the largest area and contribute most to pay the land-revenue:—

Period of five years each.	Wheat.			Peas.			Gram.			Cotton cleaned.			Indigo.			Rice uncleaned.			Bajra.			Gur.		
	M	S	C	M	S	C	M	S	C	M	S	C	M	S	C	M	S	C	M	S	C	M	S	C
1854-5 to 1858-9 ...	...	35	14	1	12	1	...	37	8	...	3	10	...	...	14	...	39	9	1	...	2	...	15	10
1859-60 to 1863-4 ...	...	29	14	1	...	8	...	28	9	...	2	11	...	...	12	...	35	7	...	29	13	...	10	11
1864-5 to 1868-9 ...	...	21	13	...	29	6	...	21	9	...	2	11	...	...	9	...	25	5	..	23	11	...	9	11
1869-70 to 1873-4 ...	...	23	1	...	29	15	...	22	...	...	2	10	...	...	11	..	34	15	.	25	...	...	9	5
1874-5 to 1876-7 ...	...	27	7	...	38	13	...	30	15	...	3	...	...	...	11	...	34	14	..	32	1	...	11	7

During the 23 years prices were lowest in the first five years, and rose generally during the next ten, falling again during the last eight years, but not so much as to reach the low prices of the first five years. Since 1877 prices have risen very much. Wheat is selling in 1881 at 13 sérs for the rupee.

Increase in cultivation.

24. The cultivated area was measured in 1857 by the patwáris, but the measurements were condemned by the Commissioner as incorrect. Experience has shown that the cultivation was largely understated. The following statement shows the area of cultivation according to the revenue survey made in 1856-57 and the measurements of the regular settlement just concluded:—

Tahsil.	Cultivation according to revenue survey.	Cultivation according to regular settlement measurements.	Difference per cent.
	Acres.	*Acres.*	*Acres.*
Muzaffargarh	164,860	170,186	— 3·2
Alipur	116,099	121,312	— 4·4
Sanánwán	110,308	107,769	— 2·3
Total ..	391,267	399,267	— 2·5

There is therefore an increase of only 8,000 acres in cultivation since 1856-57. The causes of the increase being so small were fully discussed in the assessment reports. They were neglect of the canals, arbitrary inclusion of private land in the rakhs, and generally bad revenue administration.

Jama of the district before the new assessments.

25. The average jama of the district in the five years preceding the new assessments was as follows :—

Tahsil.	Jama.
	Rs.
Muzaffargarh	2,34,864
Alipur	1,49,602
Sanánwán	1,20,505
Total ..	5,04,971

The income from cattle tirni in 1877-78 was Rs. 34,623. The tirni from camels is not included because the settlement has caused no change in its administration. The revenue from date-trees in 1877-78 was Rs. 11,503.

Assessment Circles.

26. Following the divisions of the district as formed by the sources of irrigation, the following assessment circles were formed :—

Tahsil.	Assessment Circles.
Muzaffargarh.	Bet Chenáb
	Bet Indus
	Chahi Sailábá
	Chahi
	Thal Chahi Nahri
	Chahi Nahri
Alipur.	Bet Chenáb
	Bet Indus
	Chahi Sailábá
	Chahi Nahri
Sanánwán.	Bet
	Pakka Chahi Nahri
	Thal Chahi Nahri
	Thal Chahi

Produce estimate jama.

27. The jama of the district by the produce returns came out as follows :—

Tahsil.	Assessment Circles.	Share of produce assumed to represent the jama.	Estimated jama.
Muzaffargarh.	Bet Chenáb	$\frac{22\frac{1}{2}}{100}$	64,419
	Bet Indus	$\frac{16\frac{1}{2}}{100}$	14,146
	Chahi Sailábá	$\frac{19}{100}$	25,894
	Chahi	$\frac{14}{100}$	2,118
	Thal Chahi Nahri ..	$\frac{14}{100}$	27,263
			3,25,499
	Chahi Nahri	$\frac{16\frac{1}{2}}{100}$	1,91,659
Alipur.	Bet Chenáb	$\frac{13\frac{1}{2}}{100}$	22,836
	Bet Indus	$\frac{16\frac{1}{2}}{100}$	29,451
	Chahi Sailábá	$\frac{14}{100}$	34,244
			1,68,415
	Chahi Nahri	$\frac{14\frac{1}{2}}{100}$	81,884
Sanáwán.	Bet	$\frac{13}{100}$	34,390
	Pakka Chahi Nahri ..	$\frac{15}{100}$	78,965
	Thal Chahi Nahri ..	$\frac{13\frac{1}{2}}{100}$	14,260
			1,33,341
	Thal Chahi	$\frac{14\frac{1}{2}}{100}$	5,726
	Total of District ..		6,27,255

Assessment rates adopted.

28. As stated in para. 2 of this chapter, soils were classified according to their means of irrigation as follows throughout the district :—

1. Sailábá
2. Chahi Sailábá
3. Chahi Nahri
4. Chahi
5. Paggu
6. Jhalári

The following rates were finally sanctioned by the Financial Commissioner for each kind of soil :—

SANCTIONED RATE PER ACRE.

DESCRIPTION OF SOIL.	MUZAFFARGARH TAHSIL.												ALIPUR TAHSIL.										BANANWAN TAHSIL.									
	Bet Chenab.		Bet Indus.		Chahi Sailaba.		Thal Chahi.		Thal Chahi Nahri.		Chahi Nahri.		Bet Chenab.		Bet Indus.		Chahi Sailaba.		Chahi Nahri.		Bet.		Pakka Chahi Nahri.		Thal Chahi Nahri.		Thal Chahi.			
	Rs	A	P	Rs	A	P	Rs	A	P	Rs	A	P	Rs	A	P	Rs	A	P	Rs	A	P	Rs	A	P	Rs	A	P	Rs	A	P		
Sailaba ..	1	2	6	0	15	0	0	12	0	0	12	0	1	1	6	0	15	0	0	14	0	0	13	0	0	10	0	0	8	0	0	8	0
Chahi Sailaba ..	* 1	2	6	† 0	15	0	* 0	12	0	..	..	..	* 1	1	6	† 0	15	0	‡ 0	14	0	1	6	0	* 0	13	0	1	0	0	..	..	..
Chahi Nahri ..	1	12	0	1	12	0	1	8	0	1	8	0	1	8	0	1	10	0	1	12	0	1	6	0	1	6	0	1	8	0	‡ 22	0	0
Pagga ..	1	4	0	1	4	0	1	4	0	1	4	0	1	4	0	..	..	..	1	2	0	1	4	0	1	2	0	1	5	0	0	12	0
Jhalari ..	1	4	0	1	2	0	1	2	0	1	2	0	1	4	0	..	..	..	..	..	..	1	2	0	1	0	0	0	14	0	0	12	0
Chahi Khalla ..	1	4	0	..	..	..	1	4	0	1	2	0	1	4	0	1	2	0	..	..	..	1	2	0	..	..	..	1	0	0	0	15	0	‡ 12	8	0

* Plus Rs. 9 per well and jhalar in work
† Plus Rs. 6 ditto ditto.

* Plus Rs. 9 per well in work
† Plus Rs 6 per well and jhalar in work.
‡ Plus Rs. 8 per well in work.

* Plus Rs. 6 per well and jhalár in work.
† Per well.

Fluctuating assessments in the Bet circles.

29. In consequence of the large area depending on sailab, and the uncertainty of that means of irrigation, a fluctuating system of assessment has been sanctioned for the Bet assessment circles and the chahi sailábá circle of Alípur. The procedure and rates differ slightly in the three tahsíls. In Sanánwán, which was first reported, the whole of the Bet circle will be assessed every year on the area under cultivation. Cultivation by sailáb alone will pay a mean rate of 13 annas per acre, and each well and jhalár in work will pay a yearly fee of Rs. 6. The small area of canal-irrigation in this circle will also be annually assessed. In the Indus Bet circles of Muzaffargarh and Alípur the whole cultivation will come under fluctuating assessment. The sailábá rate was fixed at 15 annas per acre, and the well and jhalár rate at Rs. 6. In the chahi sailábá circle of Alípur the whole will be annually assessed. The sailábá rate is 14 annas per acre, and the well rate Rs. 8. There is a Bet Chenáb circle in Muzaffargarh and Alípur. From the southern end of the district to the junction of the Sutlej with the Chenáb opposite Madwala, this circle is much affected by the river, and violent changes occur by erosion and by lands being thrown out or brought under cultivation. The whole of this part of the Bet circle has been brought under fluctuating assessment. The whole Chenáb Bet in both tahsíls north of the Sutlej has an assessment partly fixed and partly fluctuating. The wells have got a fixed assessment, and the sailábá land alone will be assessed annually. In Alípur the sailábá rate is Rs. 1-1-0, in Muzaffargarh Rs. 1-2-6. The well rate in the Alípur Chenáb Bet south of the Sutlej is Rs. 9.

Produce jama, revenue rate jama, and assessed jama compared.

30. The sanctioned rates gave the following jama:—

Muzaffargarh	...	... Rs.	2,52,135
Alípur	...	... „	1,53,174
Sanánwán	...	... „	1,19,604
	Total	... „	5,24,913

This is Rs. 1,02,342 less than the produce jama. The jama actually assessed was as follows:—

Muzaffargarh	...	... Rs.	2,51,302
Alípur	...	... „	1,50,385
Sanánwán	...	... „	1,22,781
	Total	... „	5,24,468

which differs from the revenue rate jama by Rs. 445 only. The new jama, Rs. 5,24,468, compared with the average jama of the last five years of the summary settlement, which was Rs. 5,04,970, gives an increase of Rs. 19,498, or 3·8 per cent.

Assessment on grazing lands.

31. Under the summary settlement, tirni, or grazing dues, were levied in those villages only which contained Government rakhs. The village grazing-lands, however large, were exempt from assessment. At the regular settlement the village grazing-lands have been assessed for the term of settlement. The assessment was based on their capability for grazing and on the number of cattle. The rates adopted varied from one rupee per 100 acres in the Thal to five rupees in the Bet. These rates gave the following jamas :—

			Rs.
Muzaffargarh	...	...	9,138
Alípur	...	...	12,712
Sanánwán	...	...	9,782
	Total	...	31,632

The grazing assessment as distributed was as follows :—

			Rs.
Muzaffargarh	...	...	9,488
Alípur	...	...	14,420
Sanánwán	...	...	9,480
	Total	...	33,388

Assessment on date trees.

32. Under the summary settlement this assessment was Rs. 11,503. The sanctioned rate for the regular settlement was one anna per tree, which gave a revenue rate jama as follows :—

			Rs.
Muzaffargarh	...	...	13,895
Alípur	...	...	4,816
Sanánwán	...	...	4,178
	Total	...	22,889

The date jama as assessed was—

			Rs.
Muzaffargarh	...	...	11,101
Alípur	...	...	4,334
Sanánwán	...	...	3,691
	Total	...	19,126

Final results of the settlement.

33. The following statement compares the new and old revenue from all sources :—

	Old Revenue.	New Revenue.
	Rs.	Rs.
Land Revenue	5,04,970	5,24,468
Grazing	34,623	33,388
Dates	11,503	19,226
Total	5,51,096	5,77,082

To the new revenue should be added the amount for which the Government rakhs are leased. This will never be less than Rs. 5,000 including Forest Department rakhs. Taking this into consideration there is an increase of Rs. 32,986.

Land-revenue assignments.

34. The jagírs and muafis in this district are very few. The village of Lalpur was assigned revenue free to the late Nawáb Foujdar Khan and his heirs in perpetuity. It is situated in the Bet Chenáb. Its assessment on the area of settlement was Rs. 2,174. The other muafis in the district aggregate Rs. 1,405 only. The assignments of land revenue as pay and ináms to zaildárs amount to Rs. 8,950.

Working of the fluctuating assessments.

35. In his Secretary's No. 8238 S, dated 18th December 1880, the Financial Commissioner desired that a statement should be prepared showing the result of the working of the new system of fluctuating assessments. The following statement shows the results:—

Name of Tahsil.	Jama of 1878-79.	Jama of 1879-80.	Jama of 1880-81.
	Rs.	Rs.	Rs.
Muzaffargarh	34,943	35,363	38,902
Alipur	76,421	80,345	81,429
Sanánwán	21,298	30,208	27,209
Total ...	1,32,662	1,45,916	1,47,540

The jama for 1878-79 is that of the old system. Since then three annual assessments have been made:—

(1.) In the cold weather of 1878-79 the jama for 1879-80 was assessed. This gave an increase of Rs, 13,254 on the jama under the old system.

(2.) In the cold weather of 1879-80 the jama for 1880-81 was assessed. This gave a further increase of Rs, 1,624.

(3.) In the cold weather of 1880-81 the jama for 1881-82 was assessed. The results are not available at present. The system is very popular. It has so far resulted in an increase of revenue. To work it successfully required activity and close attention from the District Officer and the Tahsíldárs. If the supervision is relaxed, oppression on the one hand and loss of revenue on the other will be the result.

E. O'BRIEN,

Settlement Officer.

APPENDIX I.

2.—ANNUAL DEMAND STATEMENT.

APPENDIX

2.—*Annual Demand*

TAHSIL MUZAFFARGARH.

Name of Tahsil.	Number.	VILLAGE.	Assessment of the last year of the expired settlement.	PROPOSED									
				Kharif 1935 Sambat. Rabi 1936 do.	Kharif 1936. Rabbi 1937.	Kharif 1937. Rabbi 1938.	Kharif 1938. Rabbi 1939.	Kharif 1939. Rabbi 1940.	Kharif 1940. Rabbi 1941.	Kharif 1941. Rabbi 1942.	Kharif 1942. Rabbi 1943.	Kharif 1943. Rabbi 1944.
	185	Chak Ali Daha ...	718	...	695	695	695	695	695	695	695	695
	172	Daulatpur ...	1,101	...	1,367	1,367	1,367	1,367	1,367	1,367	1,367	1,367
	108	Tibbi Bura Gharbi	439	...	436	436	436	436	436	436	436	436
	296	Brahim Wali ...	1,944	...	2,125	2,125	2,125	2,125	2,125	2,125	2,125	2,125
	403	Khakhi ...	1,796	...	2,812	2,812	2,812	2,812	2,812	2,812	2,812	2,812
	117	Yara Daha ...	589	...	501	501	501	501	501	501	501	501
	297	Makhan Bela ...	1,389	...	1,824	1,824	1,824	1,824	1,824	1,824	1,824	1,824
	298	Sandila ...	1,016	...	1,568	1,568	1,568	1,568	1,568	1,568	1,568	1,568
	279	Basti Jalal ...	565	...	1,031	1,031	1,031	1,031	1,031	1,031	1,031	1,031
	386	Basti Jhangar ...	682	...	1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,160
	387	Hassanpur Khas ...	261	...	307	307	307	307	307	307	307	307
	304	Manka Bhutta ...	1,863	...	2,535	2,535	2,535	2,535	2,535	2,535	2,535	2,535
	301	Paunta Malana ...	802	...	1,258	1,258	1,258	1,258	1,258	1,258	1,258	1,258
	385	Miranpur ...	1,774	...	2,448	2,448	2,448	2,448	2,448	2,448	2,448	2,448
	302	Mahra Khas ...	3,306	...	3,896	3,896	3,896	3,896	3,896	3,896	3,896	3,896
	153	Sharif Dewala ...	198	...	136	136	136	136	136	136	136	136
	388	Hassanpur Kaccha	975	...	1,370	1,370	1,370	1,370	1,370	1,370	1,370	1,370
	391	Ghialpur ...	300	...	736	736	736	736	736	736	736	736
	390	Khulang ...	346	...	786	786	786	786	786	786	786	786
	393	Manikpur ...	650	...	1,265	1,265	1,265	1,265	1,265	1,265	1,265	1,265
	394	Jarh Ratheb ...	600	...	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256
	383	Shujra ..	296	...	485	485	485	485	485	485	485	485
	116	Godar ...	931	..	810	810	810	810	810	810	810	810
	384	Metla ...	552	...	756	756	756	756	756	756	756	756
	3	Dewana Bahadur...	295	...	439	439	439	439	439	439	439	439
	11	Arurpur ...	352	...	472	472	472	472	472	472	472	472
	22	Chabutra Kamal ...	1,282	...	1,321	1,321	1,321	1,321	1,321	1,321	1,321	1,321
	1	Dera Fazil ...	284	...	788	788	788	788	788	788	788	788
	216	Behli ...	2,095	...	2,034	2,034	2,034	2,034	2,034	2,034	2,034	2,034
	12	Rahmuana Ziadat	349	...	422	422	422	422	422	422	422	422
	13	Amirpur Kanaka ...	899	...	1,022	1,022	1,022	1,022	1,022	1,022	1,022	1,022
	13½	Tubfapur ...	742	...	535	535	535	535	535	535	535	535
	197	Bhutapur ...	2,162	...	2,346	2,346	2,346	2,346	2,346	2,346	2,346	2,346
	196	Taliri ...	1,880	...	1,965	1,965	1,965	1,965	1,965	1,965	1,965	1,965
	250	Kanwani ...	306	...	278	278	278	278	278	278	278	278
	208	Chak Abul Fatih ...	1,184	...	1,205	1,205	1,205	1,205	1,205	1,205	1,205	1,205
	228	Chak Mithan ...	757	...	1,126	1,126	1,126	1,126	1,126	1,126	1,126	1,126
	227	Chak Ruhari ...	914	...	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111
	130	Gul Kaim Mustoi...	2,155	...	1,948	1,948	1,948	1,948	1,948	1,948	1,948	1,948
	131	Gulab Gurmani ...	748	...	1,087	1,087	1,087	1,087	1,087	1,087	1,087	1,087
	187	Mahbubwala ...	551	...	613	613	613	613	613	613	613	613
	145	Dad Kushani ...	24	...	66	66	66	66	66	66	66	66
	80	Mahra Nasheb ...	428	...	414	414	414	414	414	414	414	414
	225	Wafadarpur ...	1,520	...	1,513	1,513	1,513	1,513	1,513	1,513	1,513	1,513
	13 / 2	Chak Dedar ...	326	...	364	364	364	364	364	364	364	364
	5	Dewana Pir Rajan Baksh	346	...	233	233	233	233	233	233	233	233
	147	Khulang of Seri ...	130	...	130	130	130	130	130	130	130	130
	146	Nuran Abrind ...	58	...	138	138	138	138	138	138	138	138
	141	Fatih Surani ...	1,089	...	1,231	1,231	1,231	1,231	1,231	1,231	1,231	1,231
	122	Ali Daha ...	1,441	...	1,463	1,463	1,463	1,463	1,463	1,463	1,463	1,463
	200	Jesalwahan ...	1,343	...	1,052	1,052	1,052	1,052	1,052	1,052	1,052	1,052
	62	Taraf ...	589	...	541	541	541	541	541	541	541	541
	59	Kotla Sadat ...	589	...	450	450	450	450	450	450	450	450
	64	Pakka Sandila ...	138	...	223	223	223	223	223	223	223	223
	79	Shah Rangpur ...	718	...	890	890	890	890	890	890	890	890
		Carried over ...										

I.

Statement.

ASSESSMENT.

Kharif 1944. Rabbi 1945.	Kharif 1945. Rabbi 1946.	Kharif 1946. Rabbi 1947.	Kharif 1947. Rabbi 1948.	Kharif 1948. Rabbi 1949.	Kharif 1949. Rabbi 1950.	Kharif 1950. Rabbi 1951.	Kharif 1951. Rabbi 1952.	Kharif 1952. Rabbi 1953.	Kharif 1953. Rabbi 1954.	Kharif 1954. Rabbi 1955.	Kharif 1955. Rabbi 1956.
695	695	695	695	695	699	703	703	703	703	703	703
1,367	1,367	1,367	1,371	1,375	1,375	1,375	1,375	1,375	1,375	1,375	1,375
436	436	436	436	436	436	436	438	439	439	439	439
2,125	2,125	2,125	2,125	2,125	2,125	2,125	2,125	2,125	2,140	2,140	2,140
2,812	2,812	2,812	2,812	2,812	2,812	2,812	2,812	2,815	2,816	2,816	2,816
501	501	501	501	506	510	510	510	510	510	510	510
1,824	1,824	1,824	1,824	1,828	1,850	1,830	1,830	1,830	1,830	1,830	1,830
1,568	1,568	1,568	1,568	1,573	1,576	1,576	1,576	1,576	1,576	1,576	1,576
1,031	1,031	1,033	1,038	1,041	1,041	1,041	1,041	1,041	1,041	1,041	1,041
1,160	1,160	1,160	1,160	1,160	1,160	1,160	1,168	1,179	1,179	1,179	1,179
307	307	307	307	307	307	315	327	327	327	327	327
2,535	2,535	2,535	2,535	2,535	2,542	2,548	2,548	2,548	2,548	2,548	2,548
1,258	1,258	1,258	1,258	1,258	1,260	1,264	1,266	1,266	1,266	1,266	1,266
2,448	2,448	2,448	2,448	2,448	2,455	2,465	2,465	2,465	2,465	2,465	2,465
3,896	3,896	3,905	3,905	3,905	3,905	3,907	3,911	3,911	3,911	3,911	3,911
136	136	136	136	136	142	145	145	145	145	145	145
1370	1,370	1,370	1,373	1,380	1,380	1,382	1,385	1,385	1,385	1,385	1,385
736	736	736	736	736	737	738	738	738	738	738	738
786	786	786	786	786	791	798	801	801	801	801	801
1,265	1,265	1,265	1,265	1,265	1,265	1,265	1,265	1,265	1,265	1,267	1,270
1,256	1,256	1,256	1,256	1,256	1,256	1,258	1,260	1,260	1,260	1,260	1,260
485	485	485	485	485	485	486	488	489	489	489	489
810	810	810	810	810	811	812	812	812	812	812	812
756	756	756	756	756	760	765	765	765	765	765	765
439	439	439	439	439	439	439	447	451	451	451	451
472	472	472	472	472	475	489	495	499	501	501	501
1,321	1,321	1,321	1,321	1,321	1,321	1,341	1,351	1,351	1,351	1,351	1,351
788	788	788	788	788	806	814	814	814	814	814	814
2,034	2,034	2,034	2,034	2,034	2,034	2,035	2,036	2,036	2,036	2,036	2,036
422	431	436	436	436	436	447	452	452	452	452	452
1,030	1,034	1,034	1,034	1,034	1,034	1,044	1,049	1,049	1,049	1,049	1,049
535	538	539	539	539	539	539	539	539	539	539	539
2,346	2,346	2,346	2,346	2,347	2,347	2,352	2,356	2,356	2,356	2,356	2,356
1.965	1,965	1,975	1,983	1,984	1,984	1,984	1,984	1,984	1,984	1,985	1,985
278	278	278	278	278	278	280	283	283	283	283	283
1,205	1,205	1,205	1,214	1,218	1,218	1,218	1,218	1,218	1,218	1,218	1,218
1,126	1,126	1,126	1,126	1,141	1,162	1,172	1,175	1,175	1,175	1,175	1,175
1,111	1,111	1,111	1,120	1,128	1,128	1,128	1,128	1,128	1,128	1,128	1,128
1,948	1,948	1,957	1,965	1,965	1,971	1,976	1,976	1,976	1,976	1,976	1,976
1,087	1,087	1,087	1,087	1,087	1,091	1,095	1,095	1,095	1,095	1,095	1,095
613	613	613	613	613	613	614	615	615	615	615	615
66	66	66	66	69	72	72	72	72	72	72	72
414	414	414	439	451	451	451	451	451	451	451	451
1,513	1,513	1,513	1,513	1,520	1,537	1,552	1,556	1,556	1,556	1,556	1,556
364	364	364	364	367	369	369	369	369	369	369	369
233	233	238	241	241	241	241	241	241	241	241	241
130	130	130	130	130	137	142	142	142	142	142	142
138	138	138	138	138	140	142	142	142	142	142	142
1,231	1,231	1,231	1,233	1.234	1,234	1,237	1,240	1,240	1,240	1,240	1,240
1,463	1,463	1,463	1,463	1,463	1,463	1,463	1,463	1,471	1,479	1,479	1,479
1,052	1,052	1,052	1,052	1,0..2	1,052	1,057	1,059	1,059	1,059	1,059	1,059
541	541	541	541	541	541	541	545	547	547	547	547
452	453	453	453	453	453	453	453	454	455	455	455
223	223	223	235	244	245	245	248	253	254	254	254
890	890	890	890	890	890	890	895	897	897	897	897

APPENDIX

Name of Tahsil.	Number.	VILLAGE.	Assessment of the last year of the expired settlement.	PROPOSED									
				Kharif 1935 Sambat. Rabbi 1936 do.	Kharif 1936. Rabbi 1937.	Kharif 1937. Rabbi 1938.	Kharif 1938. Rabbi 1939.	Kharif 1939. Rabbi 1940.	Kharif 1940. Rabbi 1941.	Kharif 1941. Rabbi 1942.	Kharif 1942. Rabbi 1943.	Kharif 1943. Rabbi 1944.
TAHSIL MUZAFFARGARH.—concluded.		Brought forward ...										
	15	Rahmuana Alla Dittta	255	...	396	396	396	396	396	396	396	396
	354	Kutab Abrind ...	288	...	344	344	344	344	344	344	344	344
	267	Kot Dadan ...	1,874	...	1,875	1,875	1,875	1,875	1,875	1,875	1,875	1,875
	78	Ran ...	371	...	535	535	535	5 5	535	535	535	535
	74	Muradabad ...	1,462	...	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145
	331	Tibbi Nunari ...	2,317	...	2,162	2,162	2,162	2,162	2,162	2,162	2,162	2,162
	340	Basti Jarh ...	1,802	...	1,546	1,546	1,546	1,546	1,546	1,546	1,546	1,546
	201	Doaba ...	3,653	...	2,743	2,743	2,743	2,743	2,743	2,743	2,743	2,743
		Total ...	60,802	...	69,729	69,729	69,729	69,729	69,729	69,729	69,729	69,729
		Aggregate of the remaining villages (without Bet Circle.) ...	1,14,828	...	1,54,142	1,54,142	1,54,142	1,54,142	1,54,142	1,54,142	1,54,142	1,54,142
		Grand Total of whole villages except Bet Circle ...	1,75,630	...	2,23,871	2,23,871	2,23,871	2,23,871	2,23,871	2,23,871	2,23,871	2,23,871
		Total Bet Villages..	34,848	..	47,164	47,164	47,164	47,164	47,164	47,164	47,164	47,164
		Grand Total of Tahsil ...	2,10,478	.	2,71,035	2,71,035	2,71,035	2,71,035	2,71,035	2,71,035	2,71,035	2,71,035
TAHSIL ALIPUR.	83	Sabai Wala ...	2,450	...	2,224	2,224	2,224	2,224	2259	2,259	2,259	2,259
	84	Jahanpur ...	3,137	...	3,252	3,252	3,252	3,252	3,252	3,252	3,252	3,252
	93	Makwal Hader ...	1,936	...	2,275	2,275	2,275	2,275	2,367	2,367	2,367	2,367
	91	Ghalwan ...	5,071	...	5,433	5,433	5,433	5,433	5,433	5,433	5,433	5,433
	8	Bet Warian ...	751	...	952	952	952	952	952	952	952	952
	55	Mad Wala ...	249	...	619	619	619	619	619	619	619	619
	92	Bande Shah ...	1,048	...	1,239	1,239	1,239	1,239	1,239	1,239	1,239	1,239
	114	Gabar Arain ...	1,960	...	1,754	1,754	1,754	1,754	1,754	1,754	1,754	1,754
		Total ...	16,602	...	17,748	17,748	17,748	17,748	17,875	17,875	17 875	17,875
		Aggregate of the remaining villages (without Bet Circle) ...	...	...	65,396	65,396	65,396	65,396	65,396	65,396	65,396	65,396
		Grand Total of whole villages (except Bet Circle) ...	...	...	83,144	83,144	83,144	83,144	83,271	83,271	83,271	83,271
		Total Bet villages ...	...	...	85,802	...	...	...	...	...	...	...
		Grand Total of Tahsil ...	...	...	1,68,946	...	...	...	...	...	...	...

I.—continued.

ASSESSMENT.

Kharif 1944. Rabbi 1945.	Kharif 1945. Rabbi 1946.	Kharif 1946. Rabbi 1947.	Kharif 1947. Rabbi 1948.	Kharif 1948. Rabbi 1949.	Kharif 1949. Rabbi 1950.	Kharif 1950. Rabbi 1951.	Kharif 1951. Rabbi 1952.	Kharif 1952. Rabbi 1953.	Kharif 1953. Rabbi 1954.	Kharif 1954. Rabbi 1955.	Kharif 1955. Rabbi 1956.
402	405	405	405	405	405	413	417	417	417	417	417
344	346	347	347	347	347	347	347	347	351	353	353
1,875	1,875	1,875	1,883	1,886	1,886	1,886	1,886	1,886	1,886	1,886	1,886
535	535	535	535	535	535	535	535	535	537	538	538
1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,151	1,154	1,154	1,154	1,154
2,162	2,162	2,172	2,187	2,187	2,187	2,190	2,195	2,195	2,195	2,195	2,195.
1,546	1,546	1,546	1,546	1,546	1,546	1,546	1,546	1,548	1,549	1,549	1,549
2,743	2,743	2,749	2,762	2,772	2,774	2,774	2,774	2,774	2,774	2,774	2,774
69,745	69,767	69,825	69,949	70,054	70,186	70,373	70,494	70,551	70,576	70,582	70,585
1,54,142	1,54,142	1,54,142	1,54,142	1,54,142	1,54,142	1,54,142	1,54,142	1,54,142	1,54,142	1,54,142	1,54,142
2,23,887	2,23,909	2,23,967	2,24,091	2,24,196	2,24,328	2,24,515	2,24,636	2,24,693	2,24,718	2,24,724	2,24,727
47,164	47,164	47,164	47,164	47,164	47,164	47,164	47,164	47,164	47,164	47,164	47,164
2,71,051	2,71,073	2,71,122	2,71,255	2,71,360	2,71,492	2,71,679	2,71,800	2,71,857	2,71,882	2,71,888	2,71,891
2,259	2,259	2,259	2,259	2,259	2,259	2,259	2,259	2,259	2,259	2,259	2,259
3,252	3,252	3,252	3,252	3,252	3,252	3,252	3,268	3,268	3,268	3,268	3,268
2,367	2,367	2,367	2,367	2,367	2,367	2,367	2,367	2,378	2,378	2,378	2,378
5,433	5,433	5,433	5,445	5,445	5,445	5,445	5,445	5,445	5,445	5,445	5,445
952	952	952	952	952	952	958	958	958	959	959	959
619	619	619	619	619	619	619	619	619	623	623	623
1,239	1,239	1,239	1,239	1,239	1,239	1,243	1,243	1,250	1,250	1,250	1,250
1,754	1,754	1,754	1,754	1,755	1,755	1,759	1,759	1,759	1,759	1,759	1,759
17,875	17,875	17,875	17,887	17,888	17,888	17,902	17,918	17,936	17,941	17,941	17,941
65,396	65,396	65,396	65,396	65,396	65,396	65,396	65,396	65,396	65,396	65,396	65,396
83,271	83,271	83,271	83,283	83,284	83,284	83,298	83,314	83,332	83,337	83,337	83,337
...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...

APPENDIX

Name of Tahsil.	Number.	Village.	Assessment of the last year of the expired settlement.	PROPOSED									
				Kharif 1935 Sambat. Rabbi 1936 do.	Kharif 1936. Rabbi 1937.	Kharif 1937. Rabbi 1938.	Kharif 1938. Rabbi 1939.	Kharif 1939. Rabbi 1940.	Kharif 1940 Rabbi 1941.	Kharif 1941. Rabbi 1942.	Kharif 1942. Rabbi 1943.
TAHSIL SANAWAN	1	Ihsanpur ...	1,213	1,459 0 0	1,459	1,459	1,459	1,459	1,459	1,459	1,459
	44	Bet Rugwala ...	333	390 0 0	390	390	390	390	390	390	390
	57	Bet Mahesar ...	340	372 0 0	372	372	372	372	372	372	372
	37	Parihar Gharbi ...	1,933	2,425 0 0	2,425	2,425	2,425	2,425	2,425	2,425	2,425
	70	Tibbi Nasam ...	525	762 0 0	762	762	762	762	762	762	762
	22	Chowdhri ...	2,352	2,707 0 0	2,707	2,707	2,707	2,707	2,707	2,707	2,707
	53	Daya Chokha ...	5,241	5,271 0 0	5,271	5,271	5,271	5,271	5,271	5,271	5,271
	32	Kahiri ...	703	708 0 0	708	708	708	708	708	708	708
	43	Ladah Langar ...	1,797	1,749 0 0	1,749	1,749	1,749	1,749	1,749	1,749	1,749
		Total ...	15,737	16,843 0 0	16,843	16,843	16,843	16,843	16,843	16,843	16,843
		Aggregate of the remaining 88 villages (without Bet Circle) ...	76,505	83,835 0 0	83,835	83,835	83,835	83,835	83,835	83,835	83,835
		Grand Total of whole villages (except Bet Circle) ...	92,242	1,00,678 0 0	1,00,678	1,00,678	1,00,678	1,00,678	1,00,678	1,00,678	1,00,678
		Total Bet villages ...	30,233	35,165 8 0	...	..	...	..	..	..	...
		Total of Tahsil ...	1,22,475	1,35,843 8 0	..	...	..	..	..	..	..

I.—concluded.

ASSESSMENT.

Kharif 1943. Rabbi 1944.	Kharif 1944. Rabbi 1945.	Kharif 1945. Rabbi 1946.	Kharif 1946. Rabbi 1947.	Kharif 1947. Rabbi 1948.	Kharif 1948. Rabbi 1949.	Kharif 1949 Rabbi 1950.	Kharif 1950. Rabbi 1951.	Kharif 1951. Rabbi 1952.	Kharif 1952. Rabbi 1953.	Kharif 1953. Rabbi 1954.	Kharif 1954. Rabbi 1955.	Kharif 1955. Rabbi 1956.
1,459	1,459	1,459	1,459	1,459	1,462	1,464	1,465	1,466	1,468	1,470	1,470	
390	390	390	390	390	393	397	397	397	397	397	397	
372	372	372	372	372	372	372	372	376	380	384	384	
2,425	2,425	2,436	2,447	2,447	2,447	2,452	2,456	2,456	2,456	2,456	2,456	
762	762	762	762	762	762	765	768	768	768	768	768	
3,707	3,707	3,707	3,707	3,707	3,707	3,707	3,707	3,707	3,707	3,713	3,718	
5,271	5,271	5,271	5,271	5,271	5,271	5,271	5,271	5,275	5,279	5,279	5,279	
708	708	708	708	708	708	713	719	719	719	719	719	
1,749	1,749	1,749	1,749	1,749	1,755	1,760	1,760	1,760	1,760	1,760	1,760	
16,843	16,843	16,854	16,865	16,865	16,877	16,901	16,915	16,924	16,934	16,946	16,951	
83,835	83,835	83,835	83,835	83,835	83,835	83,835	83,835	83,835	83,835	83,835	83,835	
1,00,678	1,00,678	1,00,689	1,00,700	1,00,700	1,00,712	1,00,736	1,00,750	1,00,759	1,00,769	1,00,781	1,00,786	
..	...	...	...	..	..	...	...	..	..	..	..	
..	...	..	...	..	...	..	..	...	..	..	...	

E. O'BRIEN,
Settlement Officer.

APPENDIX II.

3. *Statement of Tenures on which the Estates are held in the Muzaffargarh District.*

Name of Tahsil.	*Zamínddri.*		*Pattidári.*		Bhaya-chara.	Mixed Pattidári and Bhayachara.	Talukadari or Istamrari.
	Land lord.	Communal.	Complete.	Incomplete.			
Muzaffargarh	12	18	9	...	377	1	59
Alípur	1	7	1	...	167	...	...
Sanawnan	...	27	1	...	106	4	...
Total ...	13	52	11	...	650	5	58

E. O'BRIEN,

Settlement Officer.

APPENDIX III.

FORM A.

4. GENERAL ABSTRACT OF AREA, RESOURCES, &c.

FORM A.—Continued.

Name of Tahsil	Former and present statement compared.	36	37	38			39	40	41	42	43			44			45			46			47			48		
		SECTION II.—RESOURCES AND CAPABILITIES CONSIDERED IN DIFFERENT ASPECTS—*concluded*.									SECTION III.—SUMMARY AND LAST SETTLEMENT JAMA COMPARED.																	
		Water Capacity.							Capacity for expansion.														Rate on cultivation.					
			Water from wells.																									
		Average Rainfall in inches.	Average depth of wells in feet to the water.	Average cost of constructing a well.			No. of yoke of oxen required per well.	Area one well can irrigate in a year.	Total area uncultivated and percentage of area in cultivated to total area (in Black type).	Head of cattle per acre.	Jama of first Summary Settlement of 1850-51.			Jama of second Summary Settlement of 1857-58.			Jama of 3rd Summary Settlement of 1860-61.			Jama of last Settlement as it stood in 1876-77.			Of Summary Settlement.			Of last settlement Jama as per Col. 46.		
Muzaffargarh	Former ...	...	...	...	...	...	...	19	2,072	1	2,49,931	4	11	2,50,882	15	10	2,18,087	8	0	2,34,769	5	10	1	12	5	1	10	10
	Present ...	...	11	215	6	6	4	20	195,229 2	1	2,49,931	4	11	2,50,882	15	10	2,18,087	8	0	2,34,769	5	10	1	4	7	1	6	2
Alípur ...	Former ...	...	...	...	...	...	...	...	39 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Present ...	7	10	210	0	0	4	12	308,096	...	1,48,432	0	0	...	...	...	...	...	...	1,56,665	0	0	1	13	6	1	4	9
Sananwan ...	Former ...	...	...	...	...	...	...	...	54 ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Present ...	126	14	212	8	0	4	16	512,281	2	1,08,362	0	0	...	...	...	...	...	...	1,21,478	0	0	1	0	3	1	2	2
Total ...	Former ...	...	...	...	...	...	...	19	60 2,072	1	2,49,931	4	11	2,50,882	15	10	2,18,087	8	0	2,34,769	5	10	1	12	5	1	10	10
	Present ...	...	12	212	10	2	4	16	1,015,606	1	5,06,725	4	11	2,50,882	15	10	2,18,087	8	0	5,12,912	5	10	1	4	5	1	4	8
									51																			

FORM A.—Concluded.

Name of Tahsil.	Former and present statement compared.	49	50	51	52	53	54	55	56	57	58
		SECTION IV.—PROPOSED JAMA WORKED OUT FROM RATES AND ESTIMATES.									
		Rates adopted in assessment.				Estimates adopted.					
		On plough.	*Irrigated.* Well.	*Irrigated.* Canal.	Unirrigated.	Half assets Jama.	Crop rates in the Canal Circle.	As per New Revenue Rates.	Present Jama of Sambat with rate on cultivated area.	Proposed Jama with rate on cultivated area.	Cultivated area of Sambat 1933 on which rates have been cultivated.
Muzaffargarh ...	Former ...	...	... ...	... ...	... ...	...	...	...	2,34,769 5 10 1 10 10	... ...	...
	Present ...	...	1 2 10	1 9 8	0 13 6	3,25,499	1,70,751	2,35,605	2,34,769 5 10 1 6 2	2,34,419 0 0 1 6 1	169,512
Alipur ...	Former ...	...	... ...	... ...	... ...	...	...	...	... ...	... ...	...
	Present ...	...	1 2 0	1 7 0	0 15 3	...	...	1,47,283	1,56,665 0 0 1 4 9	1,47,283 0 0 1 3 6	121,029
Sananwan ...	Former ...	...	... ...	1 3 3	... ...	...	...	...	... ...	... ...	...
	Present ...	...	0 13 6	0 15 6	0 9 6	...	...	1,14,733	1,21,478 0 0 Rabbi 1 2 2	1,14,760 0 0 1 1 2	106,868
Total ...	Former ...	...	... ...	1 3 3	... ...	...	...	...	2,34,769 5 10 1 10 10	... ...	...
	Present ...	...	... ...	... ...	... ...	3,25,499	1,70,751	4,97,621	5,12,912 5 10 1 4 8	4,96,462 0 0 1 4 0	397,409

E. O'BRIEN

Settlement Officer.

APPENDIX IV.

5.—GENERAL STATEMENT BY VILLAGE.

There are only 24,632 a
district. This area is eq
It is a common amusem
bullocks are yoked to t
possible for about half a
the competitors have all
which pair is the winner.
no reward, but is expected
The competetion interest
tator can conceive nothing
excitement of the Jats and
day for bullock racing is
bullock race is called Visák
occur.

14. About 200,000 acr
canals.
Canals. of Apri
nate set of the river or grea
a canal to flow all the year

The canals are 53 in nu
Chenab
Number and mileage. length
include the side channels of
heads, and which themselves

Th
Area irrigated. times h

At Regular Settlem
By canal measureme
" "
" "

The areas irrigated by the C
the Regular Settlement surve

Chenab ca
Indus can

The land-revenue depending
Settlement is—

Chenab ca
Indus can

Total

15. Before describing
accom
History and description of the canal. Muzaf
Mal, t

ARKS.

equired reduction but necessary to go so low rates.

village, on the Bhagiari rom which it gets jhallar an.

erior Bet village of poor rietors. Hence I fixed the ba rate at Re. 1 per instead of Re. 1-2-6, the ctioned revenue rate.

s assessed under rates because he Langarwah Canal which irri-gated 138 acres at measurement has ceased to flow.

This village is well situated as regards markets being at the Sher Shah Ferry. Owners well off and river action is favorable

L

APPENI

1	2
Name of Canal.	Section.
Puran ...	1st Section ...
	2nd Section ...
	3rd Section ...

There are only 3,677 acres of unassisted well irrigation in the district. This area is equal to 0 per cent. of the total cultivation. It is a common assessment to yoke bullocks at wells. A pair of bullocks are yoked to the wheel and driven round as fast as possible for about half an hour; then another pair, and so on till the competitors have all had a turn. The bystanders then decide which pair is the winner. The owner of the winning pair receives no reward, but is expected to give food or sweetmeats to the competitors. The competitors tattooing the Jats intensely. The ordinary agricultural assessment is one rupee sterling dollar. The only remarkable thing is the contentment of the Jats and how they manage to raise it. The favourable season for the kharif sowing is the first of Vaishkh (April-May); hence a kharif crop is called Vaishkhi at whatever time of the year it may be sown.

[illegible] About 200,000 acres of cultivation are irrigated by inundation canals. These in good years flow from the [illegible] of April to 15th September, occasionally a few days [illegible] rain out of the river or greater activity than usual in clearing [illegible] a canal to flow all the year round.

The canals are 13 in number, of which 11 have their heads in [illegible] Chenab and 62 are fed by the Indus. Their total length is 699 miles. This mileage does not include the side channels of the Indus in which the canals have their heads, and which themselves supply a good deal of lift irrigation.

The area irrigated has been measured [illegible] same kharifs with the following result:—

	Acres.
At Regular Settlement in 1873-75 ...	200,000
By canal measurement in 1877 ...	201,000
" " in 1878 ...	220,000
" " in 1879 ...	240,000

The areas irrigated by the Chenab and Indus Canals [illegible] the Regular Settlement survey were as follows:—

Chenab canals	... 37,715
Indus canals	... 163,331

The land revenue depending on the canals according to the [illegible] assessments:—

	Rs.
Chenab canals	... 69,407
Indus canals	... 229,640
Total of District	... 299,077

[illegible] describing each canal, attention is invited to the accompanying maps. Before which Muzaffargarh District was united [illegible] Major and Assistant Commissioner, and the Sikh Governor of Multan [illegible] also of the canal.

red reduction but
ssary to go so low
s.

illage, on the Bhagiari
m which it gets jhallar
d.

ferior Bet village of poor
prietors. Hence I fixed the
aba rate at Re. 1 per
re instead of Re. 1-2-6, the
nctioned revenue rate.

Was assessed under rates because the Langarwah Canal which irrigated 138 acres at measurement has ceased to flow.

This village is well situated as regards markets being at the Sher Shah Ferry. Owners well off and river action is favorable

L

APPENDIX

5 General Statement

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil.	Assessment Circle.	Khalisah, shared or Jagir.	Serial Number.	Village.	Highest assessment of			Average demand of last five years.	Estimated demand at the revenue rates of.	Proposed assessment.	Total area.	Waste.		
					1st Settlement.	2nd Settlement.	3rd Settlement.					Lakhiraj.	Banon.	Government rakh.
MUZAFFARGARH TAHSIL.	BET CHENAB.	KHALISAH.	1	Binda Sargana ..	365 0 9	629 0 9	509	977	1,046	1,067	1,694	..	212	..
			2	Charagh Bela ..	80 0 0	250 0 0	193	340	492	489	2,637	..	547	..
			3	Mamdal ...	..	..	..	14	16	16	21	..	..	..
			4	Khokhra Muhabat	..	26 0 0	26	1,025	1,412	1,458	2,245	..	245	..
			5	Rangpur ..	48 , 6	1,897 2 9	1,686	2,147	1,945	1,945	2,104	1	894	..
			6	Alipur ..	12 5 0	..	..	113	126	128	141	..	14	..
			7	Sanmalat ..	627 0 0	157 0 0	70	418	514	514	793	..	122	..
			8	Makku Jamal ..	561 4 8	549 12 8	464	480	434	440	757	12	458	..
			9	Fathu Fanakka..	753 0 0	1,075 0 0	,000	940	717	800	1,477	15	890	..
			10	Rane Wahan ..	173 0 0	..	..	347	339	320	626	..	13	..
			11	Sheikhpur Masti	..	..	..	169	160	167	197	..	4	..
			12	Kunli ..	36 9 6	41 0 0	41	35	37	42	35	..	..	..
			13	Mirdad ..	387 12 0	602 0 0	450	714	781	826	1,218	..	372	..
			14	Ahmadabad Kuhna	..	..	150	86	93	94	101	..	13	..
			15	Khair Din Hamiana ..	..	..	120	24	30	32	37	..	..	..
			16	Saidpur ..	289 0 0	482 12 0	392	..	480	594	950	..	320	..
			17	Margatpur ..	22 15 3	..	371	11	16	16	279	..	101	..
			18	Sanbal ..	..	..	70	..	..	..	124	..	..	124
			19	Sarwani Bela ..	,36 0 0	500 0 0	375	175	152	152	1,685	..	548	865
			20	Allah Dadi ..	776 0 0	500 0 0	400	552	395	373	788	..	354	..
			21	Umarpur ..	184 0 0	250 0 0	220	245	215	211	295	..	56	..
			22	Zamanpur ..	88 14 0	475 0 0	325	422	397	397	724	..	348	..
			23	Dhillu ..	120 0 0	200 0 0	200	113	108	99	135	..	13	..
			24	Jhokarbi ..	..	..	..	113	90	78	888	..	448	..
			25	Lutaf-Abad ..	..	..	..	..	..	..	25	..	..	..
			26	Khizanpur ..	97 0 0	330 0 0	290	585	529	487	910	..	95	..
			27	Samti ..	425 0 0	650 0 0	550	682	718	714	2,174	..	428	336
			28	Amirpur Sahu ..	..	..	..	71	70	68	114	..	26	..
			29	Khudai ..	7 5 0 0	280 0 0	220	764	615	657	5,769	..	2,029	2,225
			30	Ganji Wasti ..	..	..	..	17	38	35	600	..	538	..
			31	Lashkarpur ..	..	..	..	..	..	..	731	..	723	..
			32	Jhalarin ..	649 12 0	1,178 5 7	901	1,101	1,030	939	6,442	..	1,374	2,439
			33	Faridabad ..	50 0 0	134 2 5	80	205	306	306	890	..	440	..
			34	Pipli ..	1,200 0 0	800 0 0	700	,112	1,181	1,180	,250	..	74	..
			35	Misri ..	1,453 1 3	628 0 0	309	284	234	255	974	..	429	..
			36	Hajipur ..	460 0 0	330 0 0	250	156	161	169	397	..	69	..
			37	Pakka Sandilna..	2,995 12 6	2,424 8 0	1,995	505	462	486	2,180	..	325	..
			38	Jhanbar Lubacte	656 0 0	460 0 0	275	111	153	149	218	..	19	..
			39	Said Alipur ..	95 0 0	..	..	4	..	..	90	..	90	..
			40	Dramri ..	968 0 0	670 0 0	600	92	98	90	441	..	228	..
			41	Thatta Sialan ..	1,402 1 6	1,800 0 0	1,300	1,700	1,955	1,877	2,745	5	342	..
			42	Doaba ..	4,669 6 3	4,250 0 0	3,700	4,126	3,300	3,550	4,802	..	408	..
			43	Sonakki ..	648 0 0	500 0 0	350	595	585	560	1,037	..	59	..
				Carried over ..										

FORM A.—Concluded.

Name of Tahsil.	Former and present statement compared.	49	50	51	52	53	54	55	56	57	58
		SECTION IV.—PROPOSED JAMA WORKED OUT FROM RATES AND ESTIMATES.									
		Rates adopted in assessment.				Estimates adopted.					
		On plough.	*Irrigated.* Well.	*Irrigated.* Canal.	Unirrigated.	Half assets Jama.	Crop rates in the Canal Circle.	As per New Revenue Rates.	Present Jama of Sambat with rate on cultivated area.	Proposed Jama with rate on cultivated area.	Cultivated area of Sambat 1933 on which rates have been cultivated.
Muzaffargarh ...	Former ...	...	...	...	...	...	...	...	2,34,769 1 5 10 10	...	...
	Present ...	...	1 2 10	1 9 8	0 13 6	3,25,499	1,70,751	2,35,605	2,34,769 1 5 6 10 2	2,34,419 1 0 6 0 1	169,512
Alipur ...	Former ...	...	...	...	...	...	...	...	...	...	...
	Present ...	...	1 2 0	1 7 0	0 15 3	...	...	1,47,283	1,56,665 1 0 4 0 9	1,47,283 1 0 3 0 6	121,029
Sananwan ...	Former ...	...	...	1 3 3	...	...	...	...	...	...	...
	Present ...	...	0 13 6	0 15 6	0 9 6	...	...	1,14,733	1,21,478 Rabbi 1 0 2 0 2	1,14,760 1 0 1 0 2	106,868
Total ...	Former ...	...	...	1 3 3	...	...	...	...	2,34,769 1 5 10 10	...	...
	Present ...	...	...	...	...	3,25,499	1,70,751	4,97,621	5,12,912 1 5 4 10 8	4,96,462 1 0 4 0	397,409

E. O'BRIEN

Settlement Officer.

V.

y Village.

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR						*Assessment per acre on*			*Add to column 11 Grazing and date assessment*			
Uncultivated		*Cultivated*										REMARKS.
Cultivable waste	Lately abandoned	Irrigated	Unirrigated	Total	Total malguzari lands	Total area	Total malguzari lands	Total land under cultivation	Grazing land jamá	Date jamá	Grand Total	
577	30	234	641	875	1,482	0 10 1	0 11 6	1 3 6	50	..	1,117	
16,59	8	38	385	423	2,090	0 3 0	0 3 9	1 2 6	41	..	530	
7	..	..	14	14	21	0 12 2	0 12 2	1 2 3	..	..	16	
670	22	182	1,626	1,208	1,900	0 10 4	0 12 3	1 3 3	35	..	1,490	
239	103	808	559	1,367	1,709	0 14 10	1 2 3	1 6 9	34	400	2,379	
18	2	25	82	107	127	0 14 6	1 0 2	1 3 2	..	..	128	
249	8	17	396	413	670	0 10 4	0 12 4	1 3 11	13	2	529	
13	8	223	42	265	286	0 9 4	1 8 7	1 10 7	20	306	764	
24	40	356	152	508	572	0 8 8	1 6 8	1 9 2	30	38	868	This village required reduction but it was not necessary to go so low as revenue rates.
312	9	13	279	292	613	0 8 2	0 8 4	1 1 6	16	..	336	
57	..	28	108	136	193	0 13 7	0 13 10	1 3 8	2	..	169	
4	..	12	19	31	35	1 3 2	1 3 2	1 5 8	..	..	42	
160	21	129	536	665	846	0 10 10	0 15 7	1 3 10	18	3	847	
13	3	26	46	72	88	0 14 11	1 1 1	1 4 11	..	..	94	
11	..	3	23	26	37	0 13 10	0 13 10	1 3 8	..	..	32	
184	44	319	83	402	630	0 10 0	0 15 1	1 7 8	16	5	615	A superior village, on the Bhagiari Dhand from which it gets jhallar irrigation.
165	..	13	..	13	178	0 0 11	0 1 5	1 3 8	2	..	18	
..	..	..	..	..	..	..	..	..	..	..	...	
149	8	25	90	115	272	0 3 0	0 8 11	1 5 2	6	1	159	
30	45	134	175	309	384	0 8 1	0 15 7	1 3 3	8	..	381	
67	4	77	91	168	239	0 11 5	0 14 2	1 4 1	4	..	215	
55	3	90	230	320	378	0 8 9	1 0 10	1 3 10	3	..	400	
24	..	..	93	93	117	0 11 9	0 13 6	1 1 0	..	..	99	
361	1	..	78	78	440	0 1 5	0 2 10	1 0 0	10	..	88	An inferior Bet village of poor proprietors. Hence I fixed the sallaba rate at Re. 1 per acre instead of Re. 1-2-6, the sanctioned revenue rate.
25	..	..	..	..	25	..	..	..	..	..	..	
564	1	33	397	430	815	0 8 7	0 9 7	1 1 4	18	..	505	
767	77	212	354	566	1,410	0 6 3	0 8 1	1 4 2	42	25	781	
29	1	32	26	58	88	0 9 7	0 12 11	1 2 9	2	..	70	
973	30	169	343	512	1,515	0 3 0	0 6 11	1 4 6	60	1	718	
29	..	..	33	33	62	0 0 11	0 9 0	1 1 0	..	..	35	
8	..	..	..	..	8	..	..	..	..	..	..	
1,717	121	531	261	792	2,630	0 3 9	0 5 9	1 3 0	92	16	1,047	Was assessed under rates because the Langarwah Canal which irrigated 138 acres at measurement has ceased to flow.
190	11	48	201	249	450	0 5 6	0 10 11	1 3 8	15	..	321	
303	13	520	340	860	1,176	0 15 0	1 1 1	1 5 11	24	7	1,211	
354	2	142	47	189	545	0 4 2	0 7 6	1 5 7	18	1	274	
189	5	68	66	134	328	0 6 11	0 8 3	1 4 2	10	..	179	
1,463	23	261	108	369	1,855	0 3 7	0 4 2	1 5 4	74	83	643	
76	10	93	20	113	199	0 10 11	0 12 0	1 5 1	4	7	160	
..	..	..	..	..	..	..	..	..	..	..	..	
128	..	3	82	85	213	0 3 3	0 6 9	1 0 11	6	..	96	
777	122	484	1,015	1,499	2,398	0 10 11	0 12 6	1 4 0	45	27	1,949	
1,634	246	1,123	1,391	2,514	4,394	0 11 9	0 12 10	1 6 6	94	..	3,624	This village is well situated as regards markets being at the Sher Shah Ferry. Owners well off and river action is favorable
437	66	64	411	475	978	0 8 8	0 9 2	1 2 10	40	..	600	

APPENDIX

5 *General Statement*

Name of Tahsil. MUZAFFARGARH TAHSIL.
Assessment Circle. BET CHENAB.
Khalisah, shared or jagir. KHALISAH.

Serial Number.	Village.	Highest assessment of 1st Settlement.	Highest assessment of 2nd Settlement.	Highest assessment of 3rd Settlement.	Average demand of last five years.	Estimated demand at the revenue rates of.	Proposed assessment.	Total area.	Minhái. Lakhiraj.	Minhái. Banen.	Minhái. Government rakh.
1	Binda Sargana ..	365 0 9	629 0 9	509	977	1,046	1,067	1,694	..	212	..
2	Charagh Bela ..	80 0 0	250 0 0	193	340	493	489	2,637	..	547	..
3	Mamdal ...	..	..	..	14	16	16	21	..	..	..
4	Khokhra Muhabat	..	26 0 0	26	1,025	1,413	1,455	2,245	..	345	..
5	Rangpur ..	48 , 6	1,897 2 9	1,686	2,147	1,945	1,945	2,104	1	394	..
6	Alipur ..	12 5 0	..	..	113	126	128	141	..	14	..
7	Sanmalat ..	627 0 0	157 0 0	70	418	514	514	793	..	123	..
8	Makku Jamal ..	561 4 3	549 12 3	464	480	434	440	757	13	458	..
9	Fathu Fanakka..	753 0 0	1,075 0 0	,000	940	717	800	1,477	15	890	..
10	Rane Wahan ..	173 0 0	..	..	347	339	320	626	..	13	..
11	Sheikhpur Masti	..	..	..	169	160	167	197	..	4	..
12	Kunli ..	36 9 6	41 0 0	41	35	37	42	35	..	..	..
13	Mirdad ..	387 12 0	602 0 0	450	714	781	826	1,218	..	372	..
14	Ahmadabad Kuhna	..	..	150	86	95	94	101	..	13	..
15	Khair Din Hamiana ..	..	..	120	24	30	32	37	..	..	..
16	Saidpur ..	289 0 0	482 12 0	392	..	480	594	950	..	320	..
17	Margatpur ..	22 15 3	..	871	11	16	16	279	..	101	..
18	Sanbal ..	..	..	70	..	..	..	124	..	..	124
19	Sarwani Bela ..	,36 0 0	500 0 0	375	175	152	152	1,685	..	548	865
20	Allah Dadi ..	776 0 0	500 0 0	400	552	395	373	738	..	354	..
21	Umarpur ..	184 0 0	250 0 0	220	245	215	211	295	..	56	..
22	Zamanpur ..	88 14 0	475 0 0	325	422	397	397	724	..	346	..
23	Dhilla ..	120 0 0	200 0 0	200	113	108	99	135	..	18	..
24	Jhokarbi ..	..	..	..	113	90	78	888	..	448	..
25	Lutaf-Abad ..	..	..	..	..	..	..	25	..	..	..
26	Khizanpur ..	97 0 0	330 0 0	290	535	529	487	910	..	95	..
27	Samti ..	425 0 0	650 0 0	550	682	718	714	2,174	..	428	336
28	Amirpur Sahu ..	..	..	..	71	70	68	114	..	26	..
29	Khudai ..	75 0 0	280 0 0	220	764	615	657	5,769	..	2,029	2,225
30	Ganji Wasti ..	..	..	..	17	38	35	600	..	538	..
31	Lashkarpur ..	..	..	..	..	..	..	731	..	723	..
32	Jhalarin ..	649 12 0	1,178 5 7	901	1,101	1,030	939	6,442	..	1,374	2,439
33	Faridabad ..	50 0 0	134 2 5	80	205	306	306	890	..	440	..
34	Pipli ..	1,200 0 0	800 0 0	700	,112	1,181	1,180	,250	..	74	..
35	Missi ..	1,453 1 3	623 0 0	309	284	234	255	974	..	429	..
36	Hajipur ..	460 0 0	330 0 0	250	156	161	169	397	..	69	..
37	Pakka Sandilna..	2,995 12 6	2,424 8 0	1,995	505	462	486	2,180	..	325	..
38	Jhanbar Lubacte	656 0 0	460 0 0	275	111	153	149	218	..	19	..
39	Said Alipur ..	95 0 0	..	..	4	..	..	90	..	90	..
40	Dramri ..	968 0 0	670 0 0	600	92	98	90	441	..	228	..
41	Thatta Sialan ..	1,402 1 6	1,800 0 0	1,300	1,700	1,955	1,877	2,745	5	342	..
42	Doaba ..	4,669 6 3	4,250 0 0	3,700	4,126	3,300	3,530	4,802	..	408	..
43	Sonakki ..	648 0 0	500 0 0	350	595	585	560	1,037	..	59	..
	Carried over ..										

IV.

by Village.

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR						*Assessment per acre on*			*Add to column 11 Grazing and date assessment*			
Uncultivated		*Cultivated*										REMARKS.
Cultivable waste	Lately abandoned	Irrigated	Unirrigated	Total	Total malguzari lands	Total area	Total malguzari lands	Total land under cultivation	Grazing land jamá	Date jamá	Grand Total	
577	30	234	641	875	1,482	0 10 1	0 11 6	1 3 6	50	..	1,117	
16,59	8	38	385	423	2,090	0 3 0	0 3 9	1 2 6	41	..	530	
7	..	..	14	14	21	0 12 2	0 12 2	1 2 3	..	..	16	
670	22	182	1,026	1,208	1,900	0 10 4	0 12 3	1 3 3	35	..	1,490	
239	103	808	559	1,367	1,709	0 14 10	1 2 3	1 6 3	34	400	2,379	
18	2	25	82	107	127	0 14 6	1 0 2	1 3 2	..	..	128	
249	8	17	396	413	670	0 10 4	0 12 4	1 3 11	13	2	529	
13	8	223	42	265	286	0 9 4	1 8 7	1 10 7	20	306	764	
24	40	356	152	508	572	0 8 8	1 6 8	1 9 2	30	38	868	This village required reduction but it was not necessary to go so low as revenue rates.
312	9	13	279	292	613	0 8 2	0 8 4	1 1 6	16	..	336	
57	..	28	108	136	193	0 13 7	0 13 10	1 3 8	2	..	169	
4	..	12	19	31	35	1 3 2	1 3 2	1 5 8	..	..	42	
160	21	129	536	665	846	0 10 10	0 15 7	1 3 10	18	3	847	
13	3	26	46	72	88	0 14 11	1 1 1	1 4 11	..	..	94	
11	..	3	23	26	37	0 13 10	0 13 10	1 3 8	..	..	32	
184	44	319	83	402	630	0 10 0	0 15 1	1 7 8	16	5	615	A superior village, on the Bhagiari Dhand from which it gets jhallar irrigation.
165	..	13	..	13	178	0 0 11	0 1 5	1 3 8	2	..	18	
..	..	..	..	..	..	..	..	..	..	..	..	
149	8	25	90	115	272	0 3 0	0 8 11	1 5 2	6	1	159	
30	45	134	175	309	384	0 8 1	0 15 7	1 3 4	8	..	381	
67	4	77	91	168	239	0 11 5	0 14 2	1 4 1	4	..	215	
55	3	90	230	320	378	0 8 9	1 0 10	1 3 10	3	..	400	
24	..	..	93	93	117	0 11 9	0 13 6	1 1 0	..	..	99	
361	1	..	78	78	440	0 1 5	0 2 10	1 0 0	10	..	88	An inferior Bet village of poor proprietors. Hence I fixed the sailaba rate at Re. 1 per acre instead of Re. 1-2-6, the sanctioned revenue rate.
25	..	..	..	..	25	..	..	..	..	..	..	
564	1	53	397	450	815	0 8 7	0 9 7	1 1 4	18	..	505	
767	77	212	354	566	1,410	0 6 3	0 8 3	1 1 4	42	25	781	
29	1	32	26	58	88	0 9 7	0 12 11	1 2 9	2	..	70	
973	30	169	343	512	1,515	0 3 0	0 6 11	1 4 6	60	1	718	
29	..	..	33	33	62	0 0 11	0 9 0	1 1 0	..	..	33	
8	..	..	..	..	8	..	..	..	..	..	..	
1,717	121	531	261	792	2,630	0 3 9	0 5 9	1 3 0	92	16	1,047	Was assessed under rates because the Langarwah Canal which irrigated 138 acres at measurement has ceased to flow.
190	11	48	201	249	450	0 5 6	0 10 11	1 3 8	15	..	321	
303	13	520	340	860	1,176	0 15 0	1 1 1	1 5 11	24	7	1,211	
354	2	142	47	189	545	0 4 2	0 7 6	1 5 7	18	1	274	
189	5	68	66	134	328	0 6 11	0 8 3	1 4 2	10	..	179	
1,463	23	261	108	369	1,855	0 3 7	0 4 2	1 5 6	74	83	643	
76	10	93	20	113	199	0 10 11	0 12 0	1 5 1	4	7	160	
..	..	..	..	..	..	..	..	..	..	..	..	
128	..	3	82	85	213	0 3 3	0 6 9	1 0 11	6	..	96	
777	122	484	1,015	1,499	2,898	0 10 11	0 12 6	1 4 6	45	27	1,949	
1,634	246	1,123	1,391	2,514	4,394	0 11 9	0 12 10	1 6 6	94	..	3,624	This village is well situated as regards markets being at the Sher Shah Ferry. Owners well off and river action is favorable
437	66	64	411	475	978	0 8 8	0 9 2	1 2 10	40	..	600	

APPENDIX

5 General Statement

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil.	Assessment Circle.	Khalisah, shared or jagir.	Serial Number.	Village.	Highest assessment of 1st Settlement.	Highest assessment of 2nd Settlement.	Highest assessment of 3rd Settlement.	Average demand of last five years.	Estimated demand at the revenue rates of.	Proposed assessment.	Total area.	Mahdi. Lakhiraj.	Mahdi. Banen.	Mahdi. Government rakh.
MUZAFFARGARH TAHSIL.	BET CHENAB.	KHALISAH.	1	Binda Sargana ..	395 0 9	629 0 9	509	977	1,046	1,067	1,694	..	212	..
			2	Charagh Bela ..	80 0 0	250 0 0	193	340	493	489	2,637	..	547	..
			3	Mamdal ...	..	..	..	14	16	16	21	..	..	..
			4	Khokhra Muhabat	..	26 0 0	26	1,025	1,413	1,455	2,245	..	345	..
			5	Rangpur ..	48 .. 6	1,897 2 9	1,686	2,147	1,945	1,945	2,104	1	394	..
			6	Alipur ..	12 5 0	..	..	113	126	128	141	..	14	..
			7	Sanmalat ..	627 0 0	157 0 0	70	418	514	514	793	..	123	..
			8	Makku Jamal ..	561 4 3	549 12 3	464	480	434	440	757	13	458	..
			9	Fathu Fanakka..	753 0 0	1,075 0 0	,000	940	717	800	1,477	15	890	..
			10	Rane Wahan ..	173 0 0	..	..	347	339	320	626	..	13	..
			11	Sheikhpur Masti	..	..	..	169	160	167	197	..	4	..
			12	Kunli ..	36 9 6	41 0 0	41	35	37	42	35	..	..	..
			13	Mirdad ..	387 12 0	602 0 0	450	714	781	828	1,218	..	372	..
			14	Ahmadabad Kuhna	..	..	150	86	95	94	101	..	13	..
			15	Khair Din Hamiana ..	..	..	120	24	30	32	37	..	..	..
			16	Saidpur ..	289 0 0	482 12 0	392	..	480	594	950	..	320	..
			17	Margatpur ..	22 15 3	..	371	11	16	16	279	..	101	..
			18	Sanbal ..	..	..	70	..	..	..	124	..	..	124
			19	Sarwani Bela ..	,3 6 0 0	500 0 0	375	175	152	152	1,685	..	548	865
			20	Allah Dadi ..	776 0 0	500 0 0	400	552	395	373	733	..	354	..
			21	Umarpur ..	184 0 0	250 0 0	220	245	215	211	295	..	56	..
			22	Zamanpur ..	88 14 0	475 0 0	325	422	397	397	724	..	346	..
			23	Dhillu ..	120 0 0	200 0 0	200	113	108	99	135	..	13	..
			24	Jhokarbi ..	..	..	..	113	90	78	888	..	448	..
			25	Lutaf-Abad ..	..	..	..	..	..	..	25	..	..	..
			26	Khizanpur ..	97 0 0	330 0 0	290	535	529	487	910	..	95	..
			27	Samti ..	425 0 0	650 0 0	550	682	718	714	2,174	..	428	336
			28	Amirpur Sahu ..	..	..	..	71	70	68	114	..	26	..
			29	Khudai ..	7 5 0 0	280 0 0	220	764	615	657	5,769	..	2,029	2,225
			30	Ganji Wasti ..	..	..	..	17	38	35	600	..	538	..
			31	Lashkarpur ..	..	..	..	..	..	..	781	..	723	..
			32	Jhalarin ..	649 12 0	1,178 5 7	901	1,101	1,030	939	6,442	..	1,374	2,438
			33	Faridabad ..	50 0 0	134 2 5	80	205	306	306	890	..	440	..
			34	Pipli ..	1,200 0 0	800 0 0	700	,112	1,181	1,180	,250	..	74	..
			35	Missi ..	1,453 1 3	623 0 0	309	284	284	255	974	..	429	..
			36	Hajipur ..	460 0 0	330 0 0	250	156	161	169	397	..	69	..
			37	Pakka Sandilna..	2,995 12 6	2,424 8 0	1,995	505	462	486	2,180	..	326	..
			38	Jhanbar Lubacte	656 0 0	460 0 0	275	111	153	149	218	..	19	..
			39	Said Alipur ..	95 0 0	..	..	4	..	..	90	..	90	..
			40	Dramri ..	968 0 0	670 0 0	600	92	98	90	441	..	228	..
			41	Thatta Sialan ..	1,402 1 6	1,800 0 0	1,300	1,700	1,955	1,877	2,745	5	342	..
			42	Doaba ..	4,669 6 3	4,250 0 0	3,700	4,126	3,800	3,530	4,802	..	408	..
			43	Sonakki ..	648 0 0	500 0 0	350	595	585	560	1,087	..	59	..
				Carried over ..										

IV—*continued.*

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR						*Assessment per acre on*			*Add to column 11 Grazing and date assessment*			
Uncultivated		*Cultivated*										REMARKS.
Culturable waste	Lately abandoned	Irrigated	Unirrigated	Total	Total malguzari lands	Total area	Total malguzari lands	Total land under cultivation	Grazing land jamá	Date jamá	Grand Total	
12	8	7	21	28	48	0 10 4	0 10 4	1 1 9	..	..	31	
271	186	586	1,141	1,727	2,184	0 15 2	0 15 1	1 0 8	46	10	2,230	
467	60	478	868	1,346	1,878	0 11 10	0 14 2	1 3 9	52	5	1,718	
303	20	28	319	347	670	0 7 8	0 9 9	1 2 10	24	..	432	
314	74	430	471	901	1,289	0 13 9	0 14 6	1 4 10	38	9	1,218	
629	55	15	718	733	1,417	0 7 10	0 9 8	1 2 8	68	..	925	
533	61	271	754	1,025	1,619	0 11 0	0 12 0	1 3 0	60	3	1,280	
742	4	..	163	163	909	0 3 0	0 3 3	1 2 0	37	..	220	
451	61	179	321	500	1,012	0 10 8	0 11 10	1 3 0	26	2	778	Though the circumstances of this village required a reduction still it was not necessary to go as low as revenue rates. The river has retired to a distance and the assessment will be a fixed one.
357	52	319	119	438	847	0 12 9	0 13 3	1 9 7	21	5	727	Proprietors well off. The river had retired to a distance both rabi and kharif grown. The jamá will be fixed, not fluctuating.
567	14	6	378	384	965	0 5 9	0 7 5	1 2 7	35	..	480	
124	12	4	348	352	488	0 11 2	0 13 4	1 2 6	7	..	414	
620	8	..	410	410	1,038	0 7 2	0 7 4	1 2 6	31	..	505	
198	48	151	225	376	622	0 10 7	0 11 11	1 3 9	8	1	478	
294	28	20	148	168	490	0 5 6	0 6 8	1 3 5	16	8	228	
324	21	254	234	488	833	0 9 11	0 12 2	1 4 9	17	42	692	
829	25	169	291	460	1,314	0 4 8	0 6 10	1 3 5	43	..	602	
43	..	..	16	16	59	0 0 9	0 4 7	1 1 0	..	..	17	
306	11	..	319	319	636	0 5 11	0 9 0	1 2 0	16	..	375	
601	..	13	90	103	704	0 1 10	0 2 8	1 2 6	15	..	134	
1,126	8	..	627	627	1,761	0 5 5	0 6 7	1 2 6	71	..	796	
17	3	53	621	674	694	0 11 11	1 2 5	1 2 5	..	..	798	
898	22	..	582	582	1,502	0 5 8	0 7 2	1 2 6	60	..	738	
130	11	28	218	246	387	0 11 8	0 12 1	1 3 1	7	..	300	
92	7	..	104	104	203	0 8 8	0 8 9	1 1 1	5	..	116	
607	1	6	171	177	785	0 2 5	0 4 3	1 2 11	15	..	224	
705	..	..	110	110	815	0 1 6	0 2 6	1 2 6	20	..	147	
565	6	..	267	267	838	0 5 4	0 5 5	1 1 0	35	..	319	
354	8	68	680	748	1,110	0 11 2	0 11 8	1 1 6	25	..	845	
181	8	..	151	151	340	0 6 5	0 7 6	1 0 11	9	..	169	
516	67	38	352	390	973	0 6 9	0 7 2	1 1 10	20	..	455	Much exposed to river action. One of the *pakka* wells has silted up and has been thrown out of work.
35	1	..	128	128	164	0 13 1	0 14 1	1 2 0	2	..	146	
650	42	60	832	892	1,584	0 9 11	0 10 4	1 2 5	40	..	1,067	
16	1	20	55	75	92	0 15 0	0 15 6	1 3 0	..	..	89	
315	..	..	31	31	346	0 0 8	0 1 8	1 2 7	16	..	52	
31	..	..	5	5	36	0 2 8	0 2 8	1 3 2	2	..	8	
301	..	..	..	..	301	...	..	..	15	..	15	
4	9	..	9	9	22	0 1 9	0 7 3	1 1 9	..	..	10	
30	..	..	3	3	33	0 0 6	0 1 5	1 0 0	2	..	5	
193	..	..	..	..	193	..	..	..	10	..	10	
9,262	2,024	2,758	22,543	32,201	63,587	0 7 8	0 10 2	1 4 1	1,766	1,667	43,314	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil	Assessment Circle	Khalisah, shared or jagir	Serial No.	Village	Highest assessment of 1st Settlement	Highest assessment of 2nd Settlement	Highest assessment of 3rd Settlement	Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhai Lakhiraj	Minhai Barani	Minhai Government Pakh
				Brought forward										
			44	Bhart Wahi ..	150 0 0	150 0 0	135 0 0	22	38	31	48	..	..	..
			45	Lalpur ..	2,800 0 0	2,800 0 0	2,800 0 0	2,800	2,163	2,174	2,299	11	104	..
			46	Hajipur 2nd ..	2,882 9 6	2,859 6 6	2,400 0 0	1,673	1,704	1,661	2,244	9	362	..
			47	Shahpur ..	267 12 0	320 0 0	270 0 0	395	404	408	850	..	180	..
			48	Chak Abal Fatih	1,213 12 0	1,450 0 0	1,162 0 0	1,171	1,182	1,171	1,364	..	75	..
			49	Bulewahan ..	..	..	288 0 0	658	849	857	1,749	..	332	..
			50	Kachi Jai ..	358 7 6	500 0 0	500 0 0	1,213	1,211	1,217	1,774	..	155	..
			51	Fateh Bela ..	..	..	..	175	188	188	966	..	57	..
			52	Bet Panjari	1,279 3	1,100 0 0	500 0 0	929	595	750	1,125	..	113	..
			53	Bet Dabli ..	930 12 0	900 0 0	700 0 0	701	626	701	881	..	34	..
			54	Bet Nawan ..	784 2 9	600 0 0	600 0 0	319	444	445	1,238	..	273	..
			55	Sulemanpur ..	..	60 0 0	30 0 0	246	407	407	584	..	96	..
			56	Tahirpur ..	..	..	..	179	474	474	1,058	..	25	..
			57	Miranpur ..	479 12 0	400 0 0	320 0 0	573	449	464	702	..	80	..
			58	Taraf Dhol ..	136 4 0	160 0 0	120 0 0	235	196	204	594	..	104	..
			59	Kanwani ..	619 0 0	740 0 0	600 0 0	737	626	633	1,025	..	192	..
			60	Kothela ..	1,060 0 0	991 8 0	596 8 0	643	553	559	1,923	..	609	..
			61	Vains ..	..	..	..	19	18	17	351	..	222	..
			62	Mahra ..	..	..	..	432	369	359	977	..	341	..
			63	Bet Jhok ..	323 0 0	350 0 0	100 0 0	126	127	119	1,058	..	334	..
			64	Bet Methai Shah	..	..	..	487	725	725	2,127	..	568	..
			65	Gudpur ..	563 0 0	484 0 0	496 0 0	767	797	798	1,153	..	455	..
			66	Bet Hosaini ..	249 0 0	253 0 0	353 0 0	492	673	673	2,064	..	542	..
			67	Bet Pir Katal ..	..	170 0 0	80 0 0	270	293	293	402	..	15	..
			68	Seri Miani ..	88 0 0	50 0 0	30 15 0	106	120	111	215	..	15	..
			69	Khanpur ..	..	87 0 0	97 0 0	228	214	209	1,404	..	619	..
			70	Bhana ..	..	..	..	100	127	127	1,358	..	543	..
			71	Chak Jalalpur ..	..	..	..	287	309	284	853	..	15	..
			72	Tror Panjaini ..	760 0 0	440 0 0	..	714	895	820	1,174	..	64	..
			73	Panjani (Khas) ..	..	..	..	69	175	160	399	..	67	..
			74	Jalalpur ..	..	..	130 0 0	439	478	455	1,036	..	97	..
			75	Miran Malla ..	..	..	..	167	148	144	176	..	14	..
			76	Kadirpur ..	..	..	230 0 0	996	1,054	1,027	1,662	..	97	..
			77	Khorwala ..	103 3 0	80 0 0	40 0 0	40	96	89	95	..	..	..
			78	Hamandpur ..	..	..	..	37	36	36	847	..	92	..
			79	Rajapur ..	..	..	..	4	6	6	86	..	..	..
			80	Sheikhpur Shomali	..	..	..	..	..	..	379	..	..	..
			81	Wandar ..	..	..	..	..	10	10	91	..	..	..
			82	Khanpur Nau ..	..	..	..	2	3	3	92	..	..	..
			83	Duddi ..	..	..	..	..	..	..	427	..	..	..
				Total ..	38,026 5 9	37,009 10 3	31,910 7 0	39,971	40,211	40,541	90,490	54	20,36	

MUZAFFARGARH TAHSIL.

BET CHENAB.

KHALISAH.

—continued.

6	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR						*Assessment per acre on*			*Add to column 11 Grazing and date assessment*			
cultivated		*Cultivated*										REMARKS.
waste	Lately abandoned	Irrigated	Unirrigated	Total	Total malguzari lands	Total area	Total malguzari lands	Total land under cultivation	Grazing land jamá	Date jamá	Grand Total	
12	8	7	21	28	48	0 10 4	0 10 4	1 1 9	..	..	31	
271	186	586	1,141	1,727	2,184	0 15 2	0 15 1	1 1 0	46	10	2,230	
167	60	478	868	1,346	1,878	0 11 10	0 14 2	1 3 9	52	5	1,718	
103	20	28	319	347	670	0 7 8	0 9 9	1 2 10	24	..	432	
114	74	430	471	901	1,289	0 13 9	0 14 6	1 4 10	38	9	1,218	
129	55	15	718	733	1,417	0 7 10	0 9 8	1 2 8	68	..	925	
133	61	271	754	1,025	1,619	0 11 0	0 12 0	1 3 0	60	3	1,280	
142	4	..	163	163	909	0 3 0	0 3 3	1 2 0	37	..	220	
151	61	179	321	500	1,012	0 10 8	0 11 10	1 3 0	26	2	778	Though the circumstances of this village reqnired a reduction still it was not necessary to go as low as revenue rates. The river has retired to a distance and the assessment will be a fixed one.
57	52	319	119	438	847	0 12 9	0 13 3	1 9 7	21	5	727	Proprietors well off. The river had retired to a distance both rabi and kharif grown. The jamá will be fixed, not fluctuating.
67	14	6	378	384	965	0 5 9	0 7 5	1 2 7	35	..	480	
24	12	4	348	352	488	0 11 2	0 13 4	1 2 6	7	..	414	
20	3	..	410	410	1,038	0 7 2	0 7 4	1 2 6	31	..	505	
38	48	151	225	376	622	0 10 7	0 11 11	1 3 9	8	1	475	
04	28	20	148	168	490	0 5 6	0 6 8	1 3 5	16	8	228	
24	21	254	234	488	833	0 9 11	0 12 2	1 4 9	17	42	692	
19	25	169	291	460	1,314	0 4 8	0 6 10	1 3 5	43	..	602	
8	..	..	16	16	59	0 0 9	0 4 7	1 1 0	..	..	17	
46	11	..	319	319	636	0 5 11	0 9 0	1 2 0	16	..	375	
1	..	13	90	103	704	0 1 10	0 2 8	1 2 6	15	..	134	
6	8	..	627	627	1,761	0 5 5	0 6 7	1 2 6	71	..	796	
7	3	53	621	674	694	0 11 11	1 2 5	1 2 5	..	..	798	
3	22	..	582	582	1,502	0 5 3	0 7 2	1 2 6	60	..	733	
9	11	28	218	246	387	0 11 8	0 12 1	1 3 1	7	..	300	
5	7	..	104	104	203	0 8 3	0 8 9	1 1 1	5	..	116	
1	1	6	171	177	785	0 2 5	0 4 3	1 2 11	15	..	224	
1	..	..	110	110	815	0 1 6	0 2 6	1 2 6	20	..	147	
	6	..	267	267	888	0 5 4	0 5 5	1 1 0	35	..	319	
	8	68	680	748	1,110	0 11 2	0 11 8	1 1 6	25	..	845	
	8	..	151	151	340	0 6 5	0 7 6	1 0 11	9	..	169	
	67	38	352	390	973	0 6 9	0 7 2	1 1 10	20	..	455	Much exposed to river action. One of the *pakka* wells has silted up and has been thrown out of work.
	1	..	128	128	164	0 13 1	0 14 1	1 2 0	2	..	146	
	42	60	832	892	1,584	0 9 11	0 10 4	1 2 5	40	..	1,067	
	1	20	55	75	92	0 15 0	0 15 6	1 3 0	..	..	89	
	..	..	31	31	346	0 0 8	0 1 8	1 2 7	16	..	52	
	..	..	5	5	36	0 2 8	0 2 8	1 3 2	2	..	8	
	..	..	..	..	301	...	..	..	15	..	15	
	2	..	9	9	22	0 1 9	0 7 3	1 1 9	..	..	10	
	..	..	3	3	33	0 0 6	0 1 5	1 0 0	2	..	5	
1	..	..	..	..	193	..	..	..	10	..	10	
	2,024	2,758	22,543	32,201	63,587	0 7 8	0 10 2	1 4 1	1,766	1,067	43,314	

APPENDIX

Name of Tahsil: MUZAFFARGARH TAHSIL.
Assessment Circle: BET INDUS.
Khalisah, shared or jagir: KHALISAH.

Serial No.	Village	Highest assessment of 1st Settlement	Highest assessment of 2nd Settlement	Highest assessment of 3rd Settlement	Average demand of last five years	Estimated demand at the revenue rates of the	Proposed assessment	Total area	Minhai Lakhiraj	Minhai Banen	Minhai Government rakh
84	Bet Ludda ..	..	7 0 0	7 0 0	112	91	96	1,599	..	3	1,081
85	Bet Walidad Kholang	877 0 0	800 0 0	350 0 0	772	790	757	3,886	..	1,981	..
86	Dad Kushani with Chak Nandiwala	..	..	24 0 0	21	112	72	121	..	15	..
87	Nuran Abrind ..	367 8 0	450 0 0	350 0 0	631	592	561	3,512	..	1,529	..
88	Khulang ..	280 6 9	380 0 0	300 0 0	925	777	823	2,711	..	412	..
89	Kamal Kurai ..	436 0 0	474 0 0	400 0 0	491	419	369	638	..	81	..
90	Yara Joya ..	894 13 0	85 0 0	36 0 0	957	835	885	2,307	..	122	..
91	Bet Gurmani ..	..	10 0 0	20 0 0	141	121	121	319	..	114	..
92	Samana Dauna..	..	65 0 0	65 0 0	5·8	422	448	726	..	214	..
93	Seri Kacha ..	287 13 3	..	..	110	104	104	278	..	21	..
94	Muhammad Daha	..	..	..	10	2	9	608	..	...	58.
95	Kacha Kinjhar ..	..	132 2 3	132 2 3	790	724	724	2,082	..	136	..
96	Chak Dhonotr ..	..	..	..	53	38	40	59	..	1	..
97	Ahmad Mohana..	..	170 0 0	100 0 0	1,153	904	960	7,659	..	49	2,436
98	Bet Baitwala ..	..	..	..	319	297	297	1,975	..	314	..
99	Kutab Abrind ..	779 8 3	401 12 0	330 5 0	790	694	673	2,322	..	402	..
100	Chak Zaurwala ..	..	41 3 0	..	47	32	35	51	..	2	..
101	Malao Kuria ..	148 2 6	201 5 0	106 0 0	271	275	274	770	..	185	..
102	Chak KutabAbrind	189 13 3	88 4 0	69 11 0	70	56	56	50	..	9	..
103	Chak Malao Kuria	73 0 6	118 11 0	94 0 0	94	84	78	56	..	6	..
104	Chak Omaid Shah	..	187 7 9	45 0 0	105	93	98	288	..	24	..
105	Chak Malana ..	..	25 6 6	9 0 0	10	8	9	41	..	12	..
106	Darin ..	1,992 7 6	1,640 0 0	1,150 0 0	1,688	2,423	2,275	6,613	..	1,178	..
107	Kabul Chhajra ..	..	5 0 0	3 0 0	86	94	94	279	..	58	..
108	Futeh Muhammad Abrind	94 7 6	110 9 0	20 0 0	371	351	365	3,330	..	1,049	..
109	Bet Maitla ..	..	..	..	24	33	28	2,294	..	1,551	..
110	Bet Kaim Shah ..	530 9 0	300 0 0	250 0 0	514	592	573	6,149	..	1,456	1,85
111	Bhindi Suleman Shah. ..	..	..	..	117	207	193	5,729	..	3,048	..
112	Bet Chin ..	..	..	..	173	165	154	6,238	..	3,263	..
113	Mando ..	688 0 0	700 0 0	550 0 0	918	769	767	5,205	..	1,550	..
	Total ..	7,558 11 6	6,392 3 6	4,411 2 3	12,312	12,104	11,878	67,895	..	18,785	5,963

IV.—*continued.*

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR						*Assessment per acre on*			*Add to column 11 Grazing and date assessment*			
Uncultivated		*Cultivated*										
Culturable waste	Lately abandoned	Irrigated	Unirrigated	Total	Total malguzari lands	Total area	Total malguzari lands	Total land under cultivation	Grazing land jamá	Date jamá	Grand Total	REMARKS.
427	10	45	33	78	515	0 2 11	0 3 0	1 3 8	40	..	136	
1,190	70	396	249	645	1,905	0 3 1	0 6 4	1 2 9	57	7	821	Assessed below rates because of the inferior quality of canal irrigation which is little better than sailaba, and on account of the poverty of the people.
20	6	80	..	80	106	0 9 6	0 10 6	0 14 5	..	..	72	I could not assess higher because the great increase could not have been borne at once.
1,458	54	328	143	471	1,983	0 2 7	0 4 6	1 3 1	40	..	601	
1,568	22	401	308	709	2,299	0 4 10	0 5 9	1 [illegible] 7	72	9	904	
236	36	241	44	285	557	0 9 3	0 10 7	1 [illegible] 9	24	10	403	Soil inferior rapar and kalar, and people poor.
1,327	57	293	508	801	2,185	0 6 2	0 6 6	1 1 8	62	..	947	
84	5	34	[illegible]2	116	205	0 6 1	0 9 5	1 0 8	16	..	137	
89	5	152	266	418	511	0 9 10	0 14 0	1 1 2	16	..	464	
129	17	3	108	111	257	0 6 0	0 6 6	0 15 0	7	..	111	
..	19	2	...	2	21	0 6 10	0 6 10	4 8 0	..	..	9	This village contained only 21 acres of cultivation. It was an accident that it was not cultivated at measurement.
1,164	54	164	564	728	1,946	0 5 7	0 5 11	0 15 11	55	..	779	
21	3	16	18	34	58	0 10 10	0 11 0	1 2 10	1	..	41	
4,230	44	106	794	900	5,174	0 2 11	0 3 0	1 1 10	96	..	1,056	
1,350	7	54	250	304	1,661	0 2 5	0 2 10	0 15 8	40	..	337	
1,223	87	182	428	610	1,920	0 4 8	0 5 7	1 1 8	59	114	846	
21	..	19	9	28	49	0 11 0	0 11 5	1 4 0	..	3	38	
318	26	146	95	241	585	0 5 8	0 7 6	1 2 2	15	2	291	
9	..	32	..	32	41	1 1 11	1 5 10	1 12 0	..	21	74	
2	..	48	..	48	50	1 6 3	1 9 0	1 10 0	..	28	106	
185	4	24	51	75	264	0 5 5	0 5 11	1 4 11	9	5	112	
20	..	9	..	9	29	0 3 6	0 5 0	1 0 0	..	..	9	
3,556	144	1,167	568	1,735	5,435	0 5 6	0 6 8	1 5 0	167	60	2,502	
121	6	5	89	94	221	0 5 5	0 6 10	1 0 0	5	..	99	
1,782	124	...	375	375	2,281	0 1 6	0 2 2	0 13 0	20	..	325	For some years the lands have been deteriorating. Proprietors poor and present jamá collected with difficulty.
708	..	..	35	35	743	0 0 2	0 0 7	0 12 10	16	..	44	Much exposed to river action; only samuka was grown in the year of measurements.
2,266	50	262	258	518	2,834	0 2 2	0 3 9	1 1 8	104	4	681	
2,455	12	15	199	214	2,681	0 0 6	0 1 2	0 14 5	55	..	248	This village is much exposed to river action, being sometimes on one bank of the Indus, sometimes on the other.
2,784	15	..	176	176	2,975	0 0 5	0 0 10	0 14 0	102	..	256	
2,805	168	255	427	682	3,655	0 2 4	0 3 4	1 2 0	80	..	847	
31,548	1,045	4,479	6,075	10,554	43,147	0 3 1	0 4 5	1 2 0	1,158	263	13,299	

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil	Assessment Circle	Khalisah, shared or jagir	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhai		
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government rakh
MUZAFFARGARH TAHSIL.	CHAHI.	KHALISAH.	139	Sulli ..	125 0 0	150 0 0	130 0 0	148 0 0	166	166	5,978	..	1,212	4,153
			140	Chak Farazi Shah Muhammad ..	98 7 9	113 5 0	89 0 0	89 0 0	85	89	1,431	..	601	245
			141	Kandiwal ..	446 5 6	486 2 6	353 0 0	353 0 0	283	300	5,374	..	1,750	2,456
			142	Gullnwala ..	52 3 6	180 0 0	150 0 0	150 0 0	121	124	398	..	128	..
			143	Dera Haibat ..	630 14 9	843 5 0	773 0 0	671 0 0	686	686	5,808	..	3,853	1,156
			144	Kunnal Sandila	249 0 0	354 5 0	206 0 0	206 0 0	144	144	991	..	10	476
			145	Khanpur ..	676 2 9	794 14 2	646 0 0	667 0 0	716	716	20,594	24	10,575	8,590
			146	Sultan Khar ..	201 0 0	263 0 0	224 0 0	259 0 0	381	303	18,448	..	2,234	12,804
			147	Ahmad Bari ..	67 13 0	63 12 6	42 0 0	57 0 0	55	57	734	..	27	327
				Total ..	2,646 15 3	3,248 12 3	2,633 0 0	2,600 0 0	2,637	2,585	59,756	24	20,390	30,287
			148	Sharif Panwar ..	208 0 0	291 0 0	184 0 0	200 0 0	231	231	5,323	..	800	2,766
			149	Fazil Kalrú ..	333 0 0	343 0 0	283 0 0	283 0 0	244	245	14,385	..	3,108	10,930
			150	Muhammad Baksh Khowar ...	183 0 0	225 0 0	108 0 0	198 0 0	121	100	1,407	..	111	546
			151	Umar Budh ..	106 5 0	133 8 0	69 0 0	111 0 0	72	50	1,762	..	492	312
			152	Fatahi Budh ..	37 9 5	47 8 0	50 0 0	50 0 0	8	8	66	..	18	..
			153	Sharif Budh ..	64 0 0	94 0 0	77 0 0	77 0 0	81	55	557	..	141	..
			154	Baghwali Cholistan ..	172 0 0	188 0 0	165 0 0	165 8 0	200	180	3,707	..	1,678	1,650
			155	Fateh Aliwala ..	177 0 0	367 0 0	308 0 0	308 0 0	280	280	702	..	362	..
			156	Rodanwala ..	897 0 0	1,055 0 0	943 0 0	943 0 0	725	725	1,545	..	858	..
			157	Sherwala ..	9 5 0	56 0 0	44 0 0	44 0 0	32	32	55	..	1	..
			158	Sohara Chhokra Shomali	88 0 0	99 0 0	84 0 0	84 0 0	62	62	96	..	47	..
			159	Panjainwala ..	308 0 0	401 0 0	341 0 0	341 0 0	401	401	547	..	45	..
			160	Mannu Madan	110 0 0	152 0 0	129 0 0	129 0 0	128	129	193	..	53	..
			161	Tibbi Bura Gharbi	475 0 0	597 0 0	439 0 0	439 0 0	493	437	517	..	122	..
			162	Narain Saigal ...	136 0 0	180 0 0	125 0 0	125 0 0	135	125	228	..	60	..
			163	Sheikh Musa khalifa ..	164 0 0	206 0 0	184 0 0	184 0 0	219	219	321	..	158	..
			164	Ranjha Bilyani ..	78 1 3	100 0 0	60 0 0	60 0 0	61	61	114	..	52	..
			165	Jada Chandia ..	309 0 0	201 0 0	291 0 0	291 0 0	220	220	310	..	125	..
			166	Chhitta Dhab ..	145 8 6	177 13 5	153 0 0	153 0 0	109	109	172	..	79	..
			167	Bhimewala ..	349 0 0	386 0 0	292 0 0	292 0 0	255	256	226	..	41	..
			168	Megha Braija ..	150 0 0	148 0 0	140 0 0	140 0 0	98	98	109	..	34	..
			169	Kalanjar ..	52 0 0	172 0 0	198 0 0	198 0 0	231	231	237	..	47	..
			170	Gauhar Jangla	166 0 0	236 0 0	237 0 0	243 0 0	250	250	357	..	152	..
			171	Shah Muhammad Janubi	231 0 0	235 0 0	218 0 0	218 0 0	287	218	446	..	94	..
				Carried over ..										

IV—*continued.*

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR						*Assessment per acre on*			*Add to column 11 Grazing and date assessment*			
Uncultivated		*Cultivated*										
Culturable waste	Lately abandoned	Irrigated	Unirrigated	Total	Total malguzari land	Total area	Total malguzari land	Total land under cultivation	Grazing land jamá	Date jamá	Grand Total	REMARKS.
1,522	16	494	302	796	2,334	0 4 7	0 4 10	0 14 1	64	50	814	The only reason for not assessing up to revenue rates in this village was that the former jamá was so low.
801	4	629	513	1,142	1,947	0 10 4	0 10 8	1 2 3	64	24	1,888	
321	7	274	72	346	674	0 9 11	0 10 2	1 3 10	13	10	451	
227	36	157	85	242	505	0 10 8	0 11 0	1 6 11	11	...	357	Proprietors well off and get other income. Village is cultivated by tenants who pay a very high rate of rent, *viz.* ¼ by 2½ seers in the maund. Therefore, I maintained the present jamá though above revenue rates.
205	5	88	52	140	350	0 8 10	0 9 1	1 6 8	8	2	208	Soil good. Area of wells large. Hence I maintained the present jama though above revenue rates.
312	130	405	1,090	1,495	1,937	0 10 2	0 12 0	0 15 4	36	...	1,493	
1,113	36	872	671	1,443	2,592	0 8 11	0 10 5	1 2 9	60	33	1,782	
665	21	327	21	348	1,034	0 1 11	0 6 9	1 1 2	27	3	403	Soil inferior rapar and kalar. Proprietors very poor. It was not possible to take a greater increase than I have taken.
154	1	230	98	328	483	0 11 10	0 13 2	1 3 4	12	8	417	
59	11	143	123	266	336	0 6 4	1 0 6	1 4 10	9	7	362	Soil fairly good and proprietors well off. Former jamá maintained though above revenue rates.
330	9	572	103	675	1,014	0 9 4	1 0 1	1 8 2	42	24	1,087	Soil fairly good, owners well off and jamá collected with ease. Plenty of room for improvement, the Government rakh having been released. Hence I maintained the present jamá though above revenue rates.
68	3	295	138	433	504	0 14 8	0 15 9	1 2 4	...	4	501	
75	12	299	90	389	476	0 13 8	0 15 1	1 2 5	...	4	452	
22	1	102	210	312	335	0 15 1	1 0 3	1 1 5	...	...	340	A superior village with good soil and crops. Owners well off.
225	37	748	303	1,051	1,313	0 14 0	0 15 6	1 3 4	22	60	1,351	
14	18	328	14	342	374	0 10 2	1 7 3	1 9 5	10	30	583	
73	104	370	36	406	583	0 4 10	0 12 5	1 1 9	7	10	468	Soil inferior rapar and kalar. Proprietors poor. Three-fourths of the village mortgaged. The jama was reduced to Rs 451 in 1874-75. It is not possible to raise it again.
144	5	238	65	303	452	0 12 11	0 13 6	1 4 2	6	...	388	
225	19	284	25	309	553	0 5 6	0 11 10	1 5 2	10	4	423	
404	27	255	43	298	729	0 6 10	0 9 2	1 6 5	30	8	455	
409	21	296	70	366	796	0 7 1	0 10 3	1 6 4	25	12	547	
868	96	626	566	1,192	2,156	0 6 9	0 8 11	1 0 1	38	2	1,240	Soil inferior kalar. Land recorded as canal area is really sailaba. Owners have impoverished themselves by feuds and by coming within reach of the criminal law. I could not assess higher.
2,547	248	650	434	1,084	3,879	0 5 1	0 5 5	1 3 5	80	15	1,409	
309	17	618	19	637	963	0 10 8	1 1 7	1 10 7	26	9	1,095	
413	70	153	184	337	820	0 7 0	0 7 2	1 1 6	19	...	387	
11,505	954	9,453	5,227	14,680	27,139	0 6 11	0 10 4	1 3 0	619	319	18,401	

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil	Assessment Circle	Khalisah, shared or jagir	Serial No.	Village	Highest assessment of 1st Settlement	Highest assessment of 2nd Settlement	Highest assessment of 3rd Settlement	Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhai: Lakhiraj	Minhai: Banen	Minhai: Government rakh
MUZAFFARGARH TAHSIL.	CHAHI.	KHALISAH.	139	Sulli, ..	125 0 0	150 0 0	120 0 0	148 0 0	166	166	5,978	..	1,212	4,153
			140	Chak Farazi Shah Muhammad ..	98 7 9	113 5 0	89 0 0	89 0 0	85	89	1,431	..	601	243
			141	Kandiwal ..	446 5 6	486 2 6	353 0 0	353 0 0	283	300	5,374	..	1,750	2,456
			142	Gulluwala ..	52 3 6	180 0 0	150 0 0	150 0 0	121	124	398	..	128	..
			143	Dera Haibat ..	630 14 9	843 5 0	773 0 0	671 0 0	686	686	5,808	..	3,853	1,154
			144	Kunnal Sandila	249 0 0	354 5 0	206 0 0	206 0 0	144	144	991	..	10	476
			145	Khanpur ..	676 2 9	794 14 2	646 0 0	667 0 0	716	716	20,594	24	10,575	8,390
			146	Sultan Khar ..	201 0 0	263 0 0	224 0 0	259 0 0	381	303	18,448	..	2,234	12,804
			147	Ahmad Bari ..	67 13 0	63 12 6	42 0 0	57 0 0	55	57	734	..	27	327
				Total ..	2,616 15 3	3,248 12 3	2,633 0 0	2,600 0 0	2,637	2,585	59,756	24	20,390	30,297
			148	Sharif Panwar ..	208 0 0	291 0 0	184 0 0	200 0 0	231	231	5,323	..	800	2,766
			149	Fazil Kairú ..	333 0 0	343 0 0	283 0 0	283 0 0	244	245	14,385	..	3,108	10,030
			150	Muhammad Bakah Khoawar ...	183 0 0	225 0 0	108 0 0	108 0 0	121	100	1,407	..	211	546
			151	Umar Badh ..	106 5 0	133 8 0	69 0 0	111 0 0	72	50	1,762	..	492	312
			152	Fatahi Badh ..	37 9 3	47 8 0	50 0 0	50 0 0	8	8	66	..	18	..
			153	Sharif Budh ..	64 0 0	94 0 0	77 0 0	77 0 0	81	55	557	..	141	..
			154	Baghwali Cholistan ..	172 0 0	188 0 0	165 0 0	165 8 0	200	180	3,707	..	1,678	1,650
	THAL CHAHI NAHRI.	KHALISAH.	155	Fateh Aliwala ..	177 0 0	367 0 0	308 0 0	308 0 0	280	280	702	..	362	..
			156	Rodanwala ..	897 0 0	1,055 0 0	943 0 0	943 0 0	725	725	1,545	..	858	..
			157	Sherwala ..	0 5 0	56 0 0	44 0 0	44 0 0	32	32	55	..	1	..
			158	Sohara Chhokra Shomali	82 0 0	99 0 0	84 0 0	84 0 0	62	62	96	..	47	..
			159	Panjainwala ..	308 0 0	401 0 0	241 0 0	341 0 0	401	401	547	..	45	..
			160	Mannu Madan	110 0 0	152 0 0	129 0 0	129 0 0	128	129	193	..	53	..
			161	Tibbi Bura Gharbi	475 0 0	597 0 0	437 0 0	439 0 0	493	437	517	..	122	..
			162	Narain Saigal ...	136 0 0	180 0 0	125 0 0	125 0 0	135	125	228	..	60	..
			163	Sheikh Musa khalifa ..	164 0 0	206 0 0	184 0 0	184 0 0	219	219	321	..	158	..
			164	Ranjha Bilyani ..	78 1 3	100 0 0	60 0 0	60 0 0	61	61	114	..	52	..
			165	Jada Chandia ..	309 0 0	201 0 0	291 0 0	291 0 0	220	220	310	..	125	..
			166	Chhitta Dhab ..	145 8 6	177 12 5	153 0 0	153 0 0	109	109	172	..	79	..
			167	Bhimewala ..	349 0 0	386 0 0	292 0 0	292 0 0	255	256	226	..	41	..
			168	Megha Bralja ..	150 0 0	148 0 0	140 0 0	140 0 0	98	98	109	..	34	..
			169	Kalanjar ..	52 0 0	172 0 0	198 0 0	198 0 0	231	231	287	..	47	..
			170	Ganhar Jangla	166 0 0	236 0 0	237 0 0	243 0 0	250	250	357	..	152	..
			171	Shah Muhammad Janubi	231 0 0	235 0 0	218 0 0	218 0 0	287	218	446	..	94	..
				Carried over ..										

IV—*continued.*

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR						*Assessment per acre on*			*Add to Column 11 Grazing and date assessment*			
Uncultivated.		*Cultivated.*										
Culturable waste	Lately abandoned	Irrigated	Unirrigated	Total	Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing lands jama	Date jama	Grand Total	REMARKS.
459	21	133	..	133	613	0 1 5	0 4 1	1 4 0	16	..	182	
495	19	62	9	71	585	0 1 2	0 2 5	1 4 1	2	..	115	
875	77	216	..	216	1,168	0 1 8	0 4 1	1 6 3	2	..	327	
159	12	89	10	99	270	0 5 0	0 7 4	1 4 0	1	..	134	
180	120	427	72	499	799	0 2 4	0 13 9	1 6 0	4	..	728	
342	48	115	..	115	505	0 4 6	0 4 7	1 4 0	21	36	201	
829	87	479	..	479	1,405	0 0 11	0 8 2	1 7 11	50	179	945	
3,082	14	284	30	314	3,410	0 0 10	0 1 5	0 15 5	50	..	353	
1,336	..	44	..	44	380	0 2 3	0 2 5	1 4 9	16	..	73	
6,767	398	1,849	121	1,970	9,135	0 1 5	0 4 6	1 5 0	258	215	3,058	
1,560	30	164	..	164	1,754	0 1 5	0 2 1	1 6 6	16	..	247	
1,029	8	210	..	210	1,247	0 0 11	0 3 2	1 2 8	13	..	258	
612	50	88	..	88	750	0 1 10	1 2 2	1 2 2	8	..	108	Has deteriorated since measurements. Three wells out of the five have become waste. Soil poor. Canal supply deficient.
908	..	50	..	50	958	0 0 7	0 2 10	1 0 0	15	..	65	Very much deteriorated in consequence of feuds and deficient canal supply. Wells in work decreased from six to two. Seventeen wells out of gear.
43	..	5	..	5	48	0 1 11	0 2 8	1 9 7	..	..	8	
362	..	54	..	54	416	0 1 7	0 2 1	1 0 4	9	..	64	Circumstances similar to Umar Budh No, 161. Only one well at work and that and another waste well are mortgaged.
229	3	147	..	147	379	0 1 5	0 7 7	1 3 7	6	..	186	Soil poor and bad. People in debt. Canal supply deficient till 1876, when it improved but, the village has not yet recovered.
131	20	189	..	189	340	0 6 5	0 13 2	1 7 8	7	..	287	
148	50	489	..	489	687	0 7 6	1 0 11	1 7 3	23	..	748	
33	..	21	..	21	54	0 3 4	0 3 6	1 8 5	..	..	32	
5	2	42	..	42	49	0 10 4	1 4 3	1 7 7	..	..	62	
220	7	275	..	275	502	0 11 9	0 12 9	1 7 4	6	1	408	A very inferior village in the Thal. Lands high and canal water does not reach them.
32	21	87	..	87	140	0 10 8	0 14 9	1 7 3	..	..	129	
44	22	329	..	329	395	0 13 6	1 1 8	1 5 3	..	2	439	
47	29	92	..	92	168	0 8 9	0 11 11	1 15 9	..	2	127	
27	4	152	..	152	183	0 10 11	1 3 2	1 7 1	..	6	225	
17	1	44	..	44	62	0 8 7	0 15 9	1 6 2	..	..	61	
16	21	148	..	148	185	0 11 4	1 3 0	1 7 9	..	..	220	
1	16	76	..	76	93	0 10 2	1 2 9	1 6 11	..	..	109	
9	1	175	..	175	185	1 0 1	1 6 2	1 7 5	..	..	256	
7	3	65	..	65	75	0 14 5	1 4 11	1 8 1	..	..	98	
35	..	155	..	155	190	0 15 7	1 3 5	1 7 10	3	..	234	
24	14	167	..	167	205	0 11 2	1 3 6	1 7 11	..	4	254	A village consisting of 8 wells in the Thal. All very poor except one. Has suffered much from insufficient canal supply. Present jama collected with difficulty. It could not be increased.
147	11	194	..	194	352	0 7 10	0 9 11	1 7 0	8	8	234	

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil	Assessment Circle	Khalisah, shared or jagir	Serial No.	Village	*Highest assessment of*			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	*Minhai*		
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government rakh
MUZAFFARGARH TAHSIL.				Brought forward										
			172	Wan Petafi ..	1,061 0 0	1,282 0 0	1,065 0 0	1,065 0 0	951	951	1,171	..	462	..
			173	Gudara ..	1,110 0 0	1,035 0 0	933 0 0	930 0 0	807	807	902	..	341	..
			174	Siddhanwali ..	1,807 0 0	1,245 0 0	1,870 0 0	1,870 0 0	1,710	1,600	6,102	..	2,142	1,973
			175	Tibbi Bura Sharki	183 0 0	272 0 0	195 0 0	196 0 0	270	230	1,790	..	554	996
			176	Núr Kubra ..	940 0 0	1,114 0 0	783 0 0	783 0 0	880	783	8,113	..	2,171	5,221
			177	Sabzú Jat ..	939 0 0	1,008 0 0	745 0 0	745 0 0	836	745	6,151	..	2,407	2,8[illegible]
			178	Basira ..	1,116 2 6	1,431 6 3	1,098 0 0	1,095 0 0	1,121	1,121	2,869	..	1,921	..
			179	Gulwala ..	359 6 3	504 7 0	415 0 0	415 0 0	334	334	557	..	275	..
			180	Ahmad Surani ..	52 13 6	63 0 0	52 0 0	52 0 0	55	56	86	..	45	..
			181	Dadanwala ..	100 0 0	97 0 0	80 0 0	80 0 0	85	85	127	..	34	..
			182	Permewala ..	31 0 0	58 0 0	45 0 0	45 0 0	63	63	116	..	44	..
			183	Musa Malana ..	157 4 6	170 2 3	106 0 0	106 0 0	103	106	184	..	63	..
			184	Ghulam Haidar Surani ..	401 0 0	411 0 0	268 0 0	268 0 0	259	259	510	..	295	..
			185	Muhib Surani ..	315 0 0	399 0 0	209 0 0	209 0 0	242	209	415	..	122	..
			186	Ghulam Surani	546 0 0	560 0 0	298 0 0	298 0 0	272	272	644	..	108	..
			187	Kúreshi Purana	754 0 0	702 0 0	567 0 0	567 0 0	613	613	1,356	..	780	..
			188	Ayab Arain ..	915 3 9	1,370 0 0	1,184 0 0	1,184 0 0	965	1,084	1,746	..	728	..
			189	Sher Shah ..	159 8 9	190 0 0	160 0 0	162 0 0	129	129	188	..	90	..
			190	Yara Daha ..	585 0 0	709 0 0	589 0 0	589 0 0	475	500	966	..	434	..
			191	Haidar Dasti ..	112 7 3	130 0 0	100 0 0	100 0 0	86	87	130	..	54	..
			192	Aliwali ..	1,021 13 6	1,290 15 3	1,071 0 0	1,071 0 0	1,233	1,233	5,561	..	2,850	1,193
			193	Kherewala ..	34 1 9	62 8 6	52 0 0	52 0 0	79	79	177	..	105	..
			194	Mahbúbwala ..	381 0 0	633 8 0	551 0 0	551 0 0	578	600	1079	..	438	..
			195	Dhiranwala ..	94 13 6	239 12 9	181 0 0	181 0 0	159	159	174	..	46	..
			196	Ahmad Dewala	236 10 9	277 9 3	207 0 0	207 0 0	187	187	642	..	370	..
			197	Ghulam Parihar	450 3 3	501 1 0	403 3 3	403 3 3	318	319	667	..	297	..
			198	Gul Kaim Mustoi	2,460 0 0	2,663 0 0	2,151 0 0	2,150 0 0	1,625	1,900	3,433	..	1,258	..
			199	Zabti Kureshi ..	246 0 0	147 0 0	99 0 0	99 0 0	110	70	197	..	38	..
			200	Van Wali ..	67 5 6	91 10 6	109 0 0	109 0 0	102	109	108	..	19	..
				Carried over ..										

THAL CHAHI NAHRI.

KHALISAH.

IV.—*continued.*

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR						*Assessment per acre on*			*Add to column 11 Grazing and date assessment*			REMARKS.
Uncultivated		*Cultivated*			Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing lands jamá	Date jamá	Grand Total	
Culturable waste	Lately abandoned	Irrigated	Unirrigated	Total								
26	27	656	..	656	709	0 13 0	1 5 0	1 7 2	12	3	966	
6	8	541	..	541	555	0 14 4	1 7 3	1 7 10	..	5	812	
705	125	1,157	..	1,157	1,987	0 6 2	0 12 11	1 6 2	21	4	1,625	This village has suffered from continued failure of canals, which has left it very reduced. Mortgage very numerous. Land is mortgaged for Rs. 12,612. Considerable relief was essential.
40	20	180	..	180	240	0 4 8	0 15 4	1 4 5	2	..	232	On the tail of the Jhakri Canal, and has suffered from deficient canal supply. People poor and in debt, but unusually industrious. I could not increase up to revenue rates.
99	14	608	..	608	721	0 4 4	1 1 5	1 4 7	10	..	793	Exactly similar to the last, except in the industry of the people.
236	73	577	..	577	906	0 3 7	0 13 2	1 4 8	16	..	761	Exactly similar to the too last which it adjoins.
144	40	764	..	764	948	0 6 3	1 2 11	1 7 6	14	2	1,187	
46	7	229	..	229	282	0 9 7	1 2 11	1 7 4	4	..	338	
1	2	38	..	38	41	0 10 5	1 5 10	1 7 7	..	..	56	
33	1	59	..	59	93	0 10 9	0 14 7	1 7 11	..	..	85	
25	3	44	..	44	72	0 8 8	0 14 0	1 6 11	..	..	63	
46	4	71	..	71	121	0 9 3	0 14 0	1 7 11	..	..	106	
29	8	178	..	178	215	0 8 2	1 3 3	1 7 3	1	2	262	
118	9	166	..	166	293	0 8 1	0 11 5	1 4 2	5	3	217	This village suffered much from irregular and deficient canal supply. The western part of the village consists of bad kalar soil.
349	3	184	..	184	536	0 6 9	0 8 1	1 7 8	15	4	291	
122	37	417	..	417	576	0 7 3	1 1 0	1 7 6	4	3	620	
350	4	664	..	664	1,018	0 9 11	1 1 9	1 10 1	14	5	1,103	This village required relief in consequence of failure of the Thalwah, but it was not necessary to go as low as revenue rates.
3	5	90	..	90	98	0 4 0	1 5 1	1 6 11	..	2	131	
99	109	324	..	324	532	0 8 3	0 15 0	1 8 8	7	3	510	
14	1	61	..	61	76	0 10 8	1 2 4	1 6 10	..	1	88	
615	43	863	..	863	1,521	0 4 1	0 13 0	1 7 8	16	7	1,256	
11	6	55	..	55	72	0 7 2	1 1 7	1 7 0	..	..	79	
221	20	400	..	400	641	0 8 11	0 15 0	1 8 0	15	..	615	
18	2	108	..	108	128	0 14 7	1 3 11	1 7 7	..	..	159	
135	12	125	..	125	272	0 4 8	0 11 0	1 7 11	4	..	191	
131	23	216	..	216	370	0 7 8	0 13 10	1 7 8	7	..	326	
994	36	1,142	3	1,145	2,175	0 8 10	0 14 0	1 10 7	50	26	1,976	Relief was necessary in consequence of canal failure. Floods and deterioration since measurements, but the village is decidedly above the average, and it was not necessary to go as low as revenue rates
82	3	74	..	74	159	0 5 8	0 7 1	0 15 2	..	..	70	Only two wells in this village. The masonry of one is ruined. Canal supply failed. Measurements were made at an unusually favorable time, for the village is much worse than would seem from the papers.
13	3	73	..	73	89	1 0 2	1 3 7	1 7 11	..	..	109	

APPENDIX

Name of Tahsil: MUZAFFARGARH TAHSIL. Assessment Circle: THAL CHAHI NAHRI. Khalisah, shared or jagir: KHALISAH.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
			Serial No.	Village	Highest assessment of 1st Settlement	Highest assessment of 2nd Settlement	Highest assessment of 3rd Settlement	Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhai. Lakhiraj	Minhai. Banen	Minhai. Government rakh
				Brought forward										
			201	Gul Khakh ..	206 0 0	210 0 0	174 0 0	174 0 0	170	171	597	..	344	..
			202	Itaham Ali Mullan	43 0 0	52 0 0	52 0 0	52 0 0	38	38	36	..	9	..
			203	Sohara Chhokra Janubi ..	15 12 9	20 0 0	15 0 0	15 0 0	17	17	39	..	6	..
			204	Hitarwala ..	53 9 6	51 9 3	41 0 0	41 0 0	68	68	101	..	46	..
			205	Sharif Dewala ..	192 0 9	259 12 6	194 0 0	194 0 0	116	130	311	..	162	..
			206	Bilocha Surani..	83 5 0	80 0 0	59 0 0	50 0 0	38	38	244	..	205	..
			207	Bhadwala ..	20 14 9	32 2 ::	31 0 0	31 0 0	27	27	21	..	3	..
			208	Ali Daha ..	1,906 6 9	1,737 11 6	1,441 0 0	1,447 0 0	1,422	1,447	2,436	..	669	..
			209	Jethewala ..	77 3 0	76 8 6	101 0 0	101 0 0	102	102	152	..	67	..
			210	Gudarewala ..	79 14 6	154 13 0	126 0 0	134 0 0	174	174	267	..	104	..
			211	Nura Kureshi ..	74 6 0	110 0 0	90 0 0	90 0 0	107	107	172	..	76	..
			212	Gulab Shah ..	157 10 9	204 5 3	211 0 0	211 0 0	283	283	506	..	231	..
			213	Joyewala ..	..	..	..	..	..	..	71	..	7	..
			214	Chak Nurewala..	43 8 9	34 4 0	27 0 0	27 0 0	15	15	113	..	84	..
			215	Pakka ..	9 1 9	2 4 0	2 0 0	2 0 0	5	3	7	..	..	..
			216	Sanwai Syad ..	96 0 0	100 0 0	80 0 0	80 0 0	108	80	188	..	52	..
			217	Dahewala Mahra	123 6 6	118 15 0	96 12 4	96 12 4	78	78	100	..	36	..
			218	Bahadar Malwa	197 14 9	258 5 6	241 0 0	241 0 0	230	230	420	..	105	..
			219	Jhalarin 2nd ..	144 3 9	156 15 0	97 0 0	97 0 0	78	85	63	..	9	..
			220	Mattewala ..	75 14 3	66 1 6	52 0 0	52 0 0	47	47	62	..	29	..
			221	MahrShah ..	215 2 6	243 2 0	218 0 0	218 0 0	193	194	342	..	154	..
			222	Sahara Shah ..	180 8 6	220 0 0	150 0 0	150 0 0	141	14	175	..	58	..
			223	Jalwala ..	34 11 6	28 12 0	18 0 0	18 0 0	28	22	64	..	40	..
			224	Chak Ali Daha ..	296 7 9	759 8 6	681 0 0	712 0 0	698	698	2,138	..	1,455	..
			225	Baharewala ..	99 15 6	64 5 0	57 0 0	57 0 0	47	57	58	..	15	..
			226	Daulatpur ..	1,140 0 0	1,147 0 0	1,100 0 0	1,101 0 0	1,465	1,330	5,893	93	2,025	1,732
			227	Gujarwala ..	65 11 9	108 8 0	128 0 0	128 0 0	141	141	373	..	173	..
			228	Baghpur ..	842 0 0	684 0 0	596 0 0	596 0 0	524	550	592	..	182	..
				Total ..	28,102 0 9	31,728 12 11	26,808 0 0	26,884 8 0	25,950	25,686	95,092	93	33,481	29,257

IV.—*continued.*

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR						*Assessment per acre on*			*Add to column 11 Grazing and date assessment*			
Uncultivated		*Cultivated*			Total Malgtzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing lands jama	Date jama	Grand Total	REMARKS.
Culturable waste	Lately abandoned	Irrigated	Unirrigated	Total								
127	11	115	..	115	253	0 4 7	0 10 7	1 7 9	3	..	174	
1	1	25	..	25	27	1 0 11	1 6 6	1 8 4	..	..	38	
21	1	11	..	11	33	0 7 0	0 8 3	1 8 9	..	..	17	
10	...	45	..	45	55	0 10 9	1 3 9	1 8 2	..	..	68	
65	5	79	..	79	149	0 6 8	0 14 0	1 10 4	2	13	145	
12	2	25	..	25	39	0 2 6	0 15 7	1 8 4	..	..	38	
..	...	18	..	18	18	1 4 7	1 8 0	1 8 0	..	3	30	
765	31	970	..	970	1,766	0 9 6	0 13 1	1 7 0	28	4	1,479	
21	1	73	..	73	95	0 10 1	1 1 2	1 6 4	..	..	102	
26	16	121	..	121	163	0 10 5	1 1 1	1 7 0	1	..	175	
17	6	73	..	73	96	0 9 11	1 1 10	1 7 5	..	..	107	
76	4	195	..	195	275	0 8 11	1 0 6	1 7 3	..	..	283	
64	...	...	..	..	64	...	...	...	..	..	..	
..	19	10	..	10	29	0 2 1	0 8 3	1 8 0	..	..	15	
3	1	3	..	3	7	0 6 10	0 6 10	1 0 0	..	..	3	Only one well, which is old and masonry ruined. Soil bad kalar.
66	18	72	..	72	156	0 6 10	0 8 2	1 1 9	..	..	80	Land high and only gets water when the canals are at their highest. Deteriorated since measurements.
12	...	52	..	52	64	0 12 6	1 3 6	1 8 0	..	..	78	
137	17	161	..	161	315	0 8 9	0 11 8	1 6 10	7	2	239	
2	...	52	..	52	54	0 5 7	1 9 2	1 10 2	..	..	85	
1	...	32	..	32	33	0 12 2	1 6 9	1 7 6	..	..	47	
58	...	130	..	130	188	0 9 1	1 0 6	1 7 6	4		198	
21	1	95	..	95	117	0 13 0	1 3 5	1 7 11	..	..	142	
2	3	19	..	19	24	0 5 6	0 14 8	1 2 6	..	..	22	Only one inferior well with a cultivated area of 19 acres. Owners poor.
200	5	478	..	478	683	0 5 3	1 0 4	1 7 4	5	..	703	
12	...	31	..	31	43	0 15 9	1 5 3	1 5 5	..	..	57	Much improved. Crops and soil good, and canal water abundant.
970	84	989	..	989	2,043	0 5 1	0 10 5	1 5 6	40	5	1,375	The village suffers much from floods which are irremediable, because they are introduced by an old bed of the Indus. People a lawless set of Chandia Beloches, and very poor. Present jama collected with difficulty. I could not get any nearer to revenue rates.
94	7	84	..	94	200	0 6 1	0 11 3	1 8 0	3	..	144	
32	20	358	..	358	410	0 14 10	1 5 6	1 8 7	..	4	554	
12,237	1,214	17,808	3	17,811	32,262	0 6 3	0 12 9	1 7 1	424	124	26,234	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil	Assessment Circle	Khalisah, shared or jagir	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhai.		
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government rakh
				Brought forward										
MUZAFFARGARH TAHSIL.			256	Taraf Sukha ..	604 0 0	300 0 0	250 0 0	250 0 0	239	250	315	..	35	..
			257	Chak Inayatpur	..	22 8 0	30 0 0	30 0 0	32	32	39	..	1	..
			258	Chak Rampur ..	64 3 3	61 6 6	53 0 0	53 0 0	160	106	155	..	13	..
			259	Inayatpur ..	..	277 0 0	370 0 0	370 0 0	719	619	854	..	63	..
			260	Usafpur ..	202 13 0	220 0 0	140 0 0	140 0 0	217	180	212	..	14	..
			261	Rampur ..	773 11 6	601 9 6	497 0 0	648 0 0	1,070	1,070	3,059	..	200	514
			262	Jalalabad ..	516 0 0	280 0 0	300 0 0	300 0 0	565	505	982	3	449	..
			263	Muburakpur .	439 0 0	209 0 0	200 0 0	200 0 0	543	470	5,187	..	581	2,345
	THAL CHAHI NAHRI.	KHALISAH	264	Jagatpur ..	550 0 0	640 0 0	550 0 0	554 0 0	845	845	1,162	18	92	..
			265	Panj grain ..	1,152 0 0	856 0 0	800 0 0	800 0 0	749	800	1,713	..	95	..
			266	Thatta Kureshi	1,363 3 3	1,200 0 0	1,200 0 0	1,240 0 0	611	950	822	1	118	..
			267	Taraf Massa ..	790 11 0	515 1 4	695 0 0	695 0 0	399	595	485	..	44	..
			268	Ganga ..	723 0 0	580 0 0	580 0 0	580 0 0	307	480	286	1	21	..
			269	Chak Muhsan Khan ..	789 0 0	900 0 0	750 0 0	760 0 0	381	659	655	2	62	..
			270	Khangarh ..	5,761 0 0	3,494 8 9	3,100 0 0	3,105 0 0	1,142	2,640	1,031	14	201	..
			271	Kamalpur ..	2,196 0 0	1,550 0 0	1,450 0 0	1,500 0 0	1,007	1,107	1,478	3	86	..
			272	Sadewahan ..	3,289 0 0	2,400 0 0	1,800 0 0	1,800 0 0	1,353	1,500	2,110	..	118	190
			273	Patni ..	300 0 0	360 0 0	300 0 0	300 0 0	495	450	1,635	..	85	450
				Carried over ..										

IV.—*continued.*

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR.						*Assessment per acre on*			*Add to column 11 Grazing and Date assessment.*			
Uncultivated		*Cultivated.*										
Culturable waste.	Lately abandoned.	Irrigated.	Unirrigated.	Total.	Total Malguzari lands.	Total area.	Total Malguzari lands.	Total land under cultivation.	Grazing lands jama.	Date jama.	Grand Total.	REMARKS.
326	23	131	..	131	480	0 7 9	0 8 4	1 14 6	17	78	345	
21	..	17	..	17	38	0 13 2	0 13 6	1 14 1	..	13	45	
54	1	87	..	87	142	0 10 11	0 11 11	1 3 6	3	37	146	The former jama was very light. The people are in middling circumstances. I have doubled the former jama. It was not safe to go higher.
372	31	386	..	386	789	0 11 7	0 12 7	1 9 8	20	600	1,239	Former jama very light. I could not go as high as revenue rates, for the owners could not bear a greater enhancement. The proposed jama is nearly double the former jama.
6	9	128	..	128	198	0 13 7	0 14 7	1 6 6	3	39	222	Has suffered from insufficient canal supply. The owners except the Kirars and Khokhars are badly off. I could not assess up to revenue rates.
1,656	101	588	..	588	2,345	0 6 9	0 7 4	1 13 1	88	400	1,558	
203	55	272	..	272	530	0 8 3	0 15 3	1 13 8	24	146	675	
1,916	50	295	..	295	2,261	0 2 8	0 3 4	1 9 6	50	34	554	The great increase requires justification. Half the village has been bought by wealthy men, and a new canal has been made which will irrigate the village. There is great room for improvement.
555	46	452	..	452	1,053	0 11 8	0 12 10	1 13 11	30	68	943	
1,169	42	407	..	407	1,618	0 7 6	0 7 11	1 8 3	61	406	1,267	
232	60	283	128	411	703	1 2 6	1 5 7	2 5 0	15	51	2,026	This is a very good village, but the jama was collected with great difficulty, and the sailaba lands were assessed much too high. Hence a reductionwas necessary, but we need not go so low as revenue rates.
205	19	217	..	217	441	1 3 8	1 5 7	2 11 10	11	67	673	A superior village near Khangarh. It has deteriorated and some reduction is necessary. Still the village is much above the average.
99	1	164	..	164	264	1 10 10	1 13 1	2 14 10	5	37	522	Exactly similar to the last, which it adjoins.
259	23	182	127	309	591	1 0 1	1 1 10	2 2 1	14	59	732	
174	32	610	..	610	816	2 9 0	3 3 9	4 5 3	10	166	2,816	A very superior village in every way—soil, water, and markets. The former jama was severely felt and some reduction was essential.
820	27	542	..	542	1,389	0 12 0	0 12 9	2 0 3	42	86	1,235	The village is above the average.
916	163	723	..	723	1,802	0 12 6	0 13 4	2 1 2	54	73	1,627	A village in distress from over-assessment and deficient canal supply. Still there is no need to go as low as revenue rates.
794	36	264	..	264	1,094	0 6 1	0 8 7	1 11 3	30	14	494	The former jama was very low and little improvement has occurred. I could not assess higher.

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil.	Assessment Circle.	Khalisa, shared or Jagir.	Serial No.	Village.	Highest assessment of			Average demand of last five years.	Estimated demand at the Revenue Rates of	Proposed assessment.	Total area.	Minhdi.		
					1st Settlement.	2nd Settlement.	3rd Settlement.					Lakhiráj.	Banen.	Government Rakh.
				Brought forward										
			274	Gopang ..	244 7 6	207 9 8	126 0 0	126 0 0	315	315	309	..	51	..
			275	Sheikhpur ..	240 4 3	192 6 4	174 0 0	174 0 0	357	300	310	..	252	..
			276	Kasba 2nd ..	590 0 0	420 0 0	420 0 0	420 0 0	526	516	947	..	49	..
			277	Gere Wahan ..	1,598 0 0	1,260 0 0	1,150 0 0	1,100 0 0	870	1,000	1,563	..	61	..
			278	Chuharpur ..	1,702 4 9	1,630 15 3	1,617 0 0	1,617 0 0	526	1,282	594	..	57	..
			279	Matot ..	6,485 14 0	4,631 0 0	3,925 0 0	3,925 0 0	1,447	3,525	1,215	6	100	..
			280	Rangilpur ..	942 4 6	736 8 0	737 8 0	737 0 0	428	650	436	..	26	..
KUZAFFARGARH TAHSIL.	THAL CHAHI NAHRI.	KHALISA.	281	Wasti Wahan ..	196 4 0	107 0 0	107 0 0	107 0 0	83	90	200	..	14	..
			282	Jhok ..	2,967 0 0	2,360 0 0	2,100 0 0	1,542 0 0	961	1,452	1,187	1	894	..
			283	Gajju Wahan ..	2,664 4 6	2,075 11 6	1,927 0 0	1,914 0 0	1,565	1,700	2,873	..	187	..
			284	Fazilwala ..	4 15 0	4 0 0	4 0 0	4 0 0	10	10	24	..	..	..
			285	Lang	815 0 0	460 0 0	500 0 0	500 0 0	317	427	640	..	413	..
			286	Saiffullahpur ..	214 3 6	224 4 6	173 0 0	173 0 0	118	173	159	..	34	..
			287	Mond ..	1,084 0 0	940 0 0	900 0 0	900 0 0	577	900	997	..	229	..
			288	Khokhar ..	1,665 8 0	1,470 0 0	1,300 0 0	1,300 0 0	553	1,180	803	..	47	..
				Carried over ...										

IV.—*continued.*

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR.						*Assessment per acre on*			*Add to column 11 Grazing and Date assessment.*			
Uncultivated.		*Cultivated.*										
Culturable waste.	Lately abandoned.	Irrigated.	Unirrigated.	Total.	Total Malguzari lands.	Total area.	Total Malguzari lands.	Total land under cultivation.	Grazing lands jama.	Date jama.	Grand Total.	REMARKS.
66	6	177	..	177	249	1 0 10	1 4 3	1 12 6	4	..	319	
426	7	195	..	195	628	0 5 3	0 7 8	1 8 7	22	..	322	Improvement small. Former jama very light. I could not assess higher.
540	83	275	..	275	898	0 8 9	0 9 2	1 14 0	31	7	554	
987	45	470	..	470	1,502	0 10 3	0 10 8	2 2 1	40	7	1,047	This village has been in difficulties since I have known it. Jama collected with difficulty. People poor and in debt. The reduction I have given will be sufficient.
233	21	283	..	283	537	2 2 6	2 6 2	4 8 6	13	54	1,349	A village of first rate soil and crops near Khangarh. A reduction was necessary because the village had suffered from deficient canal supply. Still the village is so good, it was not necessary to go so low as revenue rates.
292	43	774	..	774	1,109	2 11 9	3 0 0	4 4 9	17	180	3,522	A very superior village close to Khangarh reduced by canal failure and a high jama. Still it was not necessary to go so low as revenue rates.
153	13	244	..	244	410	1 7 10	1 9 4	2 10 7	8	23	681	Some of the wells are decidedly bad and the jama is collected with difficulty. Reduction was necessary but there was no need to go as low as revenue rates as the village is decidedly above the average.
102	29	43	12	55	186	0 7 2	0 7 9	1 10 2	6	4	100	
270	33	435	254	689	992	1 3 7	1 7 5	2 1 9	30	96	1,578	A rich village which has deteriorated. Jama collected with difficulty. Cultivation and the number of wells decreased; still we need not go so low as revenue rates, for the village is one of the rich Khangarh villages.
,720	45	909	12	921	2,686	0 9 6	0 10 2	1 13 6	88	122	1,910	Resembles the last except that there is little difficulty in collecting the jama. Reduction must be given to the poorer owners and the bad wells; but it is a sugarcane village and we need not go as low as revenue rates.
16	..	8	..	8	24	0 6 8	0 6 8	1 4 0	..	..	10	
41	10	176	..	176	227	0 10 8	1 14 1	2 6 10	8	150	580	One of the rich Khangarh villages, decidedly inferior to its neighbours.
53	9	63	..	63	125	1 1 5	1 6 2	2 11 11	..	14	187	A rich Khangarh village.
447	13	308	..	308	768	0 14 5	1 2 10	2 14 9	23	203	1,126	A superior sugarcane Khangarh village. Former jama maintained.
446	15	295	..	295	756	1 7 6	1 9 0	4 0 0	23	89	1,292	One of the best villages in the district, but the owners are much indebted and some reduction is necessary.

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil.	Assessment Circle.	Khalsa, shared or Jagir	Serial No.	Village.	Highest assessment of			Average demand of last five years.	Estimated demand at the Revenue Rates of	Proposed assessment.	Total area.	Minhái.		
					1st Settlement.	2nd Settlement.	3rd Settlement.					Lakhirá.	Banjar.	Government Rakh.
				Brought forward										
MUZAFFARGARH TAHSIL.	THAL CHABI NAHR I.	KHALSA.	289	Kotla ..	353 0 3	322 14 9	297 0 0	297 0 0	110	160	259	..	21	..
			290	Chak Chuharpur	110 11 9	96 2 0	86 0 0	86 0 0	42	66	86	..	6	..
			291	Rakba Nur Khan	4,201 8 0	3,500 0 0	3,140 0 0	3,140 0 0	2,408	2,800	2,534	..	172	..
			292	Amanpur ..	216 14 0	150 0 0	150 0 0	150 0 0	270	200	734	..	22	..
			293	Dittanwali ..	395 7 6	260 0 0	300 0 0	300 0 0	696	520	79	..	97	..
			294	Baghwala ..	235 0 0	240 0 0	150 0 0	169 0 0	437	374	600	5	21	..
			295	Mondka ..	2,037 0 0	1,872 0 0	1,691 0 0	1,697 0 0	1,966	1,966	1,826	..	306	..
			296	Chak Alam Shah	95 0 0	112 0 0	112 0 0	112 0 0	97	112	62	..	4	..
			297	Tibba Bhattian ..	1,134 11 6	796 11 0	701 0 0	701 0 0	1,421	1,050	1,242	..	110	..
			298	Wahi Mirza Beg	513 15 3	363 5 0	346 0 0	346 0 0	633	533	1,192	..	204	..
			299	Pakka Ghalwan	486 0 0	761 14 9	387 0 0	387 0 0	434	449	379	..	21	..
			300	Wasti Kazi ..	1,182 0 0	1,180 0 0	1,177 0 0	1,177 0 0	1,661	1,661	1,494	..	74	..
			301	Jogi Wali ..	40 0 0	36 0 0	105 0 0	305 0 0	125	85	1,067	..	76	..
			302	Chimruwala ..	476 14 6	367 8 0	292 0 0	292 0 0	328	328	362	1	25	..
			303	Shakar Bela ..	436 6 9	400 0 0	350 0 0	300 0 0	266	266	531	..	40	..
			304	Kabirpur ..	1,187 9 6	1,012 8 0	908 0 0	908 0 0	931	931	1,076	..	48	..
			305	Jalwala Amir Pir	49 9 6	50 3 9	80 0 0	80 0 0	144	144	2,416	..	32	1
			306	Chak Ghasanfargar	31 6 3	41 0 0	41 0 0	41 0 0	32	34	39	..	3	..
			307	Muhammadpur ..	1,367 0 0	1,400 0 0	1,200 0 0	1,200 0 0	1,605	1,605	1,736	..	167	..
			308	Ghasanfargarh ..	1,002 0 0	1,065 0 0	875 0 0	873 0 0	961	961	1,682	..	139	..
			309	Kot Dadan ..	1,913 0 0	2,034 0 0	1,784 0 0	1,784 0 0	1,419	1,784	1,300	1	353	..
			310	Umarpur ..	2,056 0 0	1,610 0 0	1,550 0 0	1,962 0 0	1,795	1,982	2,553	..	234	..
				Carried over ..										

IV.—*continued.*

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR.						*Assessment per acre on*			*Add to column 11 Grazing and Date assessment.*			REMARKS.
Uncultivated.		*Cultivated.*										
Culturable waste.	Lately abandoned.	Irrigated.	Unirrigated.	Total.	Total Malguzari lands.	Total area.	Total Malguzari lands.	Total land under cultivation.	Grazing lands jama.	Date jama.	Grand Total.	
149	24	66	..	65	238	0 11 1	0 12 1	2 12 4	9	4	193	The village is much reduced by canal failure plus a high assessment. The canals have been improved, but some reduction is necessary. Still it is well above the average.
53	3	24	..	24	80	0 12 3	0 13 2	2 12 0	3	4	73	Very similar to the last to which it was attached before this settlement.
1,010	54	1,285	13	1,298	2,362	1 1 8	1 3 0	2 2 6	53	21	2,874	Like the rest of the Khangarh villages. Reduced by canal failure and high jama, but still much above the average.
515	51	146	..	146	712	0 4 4	0 4 6	1 5 11	28	..	228	Soil Ralam. Owners poor. Canal supply deficient till lately. I could not assess as high as revenue rates.
285	23	386	..	386	694	0 10 6	0 12 0	1 5 7	15	2	537	On the edge of the Thal. In 1878 was injured by a flood. Sales and mortgages many. I could not assess higher.
322	14	238	..	238	574	0 10 0	0 10 5	1 9 2	17	2	393	Suffers from floods. The former jama very light. I have more than doubled the jama and could not go higher.
363	51	1,106	..	1,106	1,520	1 1 3	1 4 5	1 12 5	35	18	2,619	
6	..	52	..	52	58	1 12 11	1 15 9	2 2 6	..	3	115	Consists of two good sugarcane wells. Former jama maintained.
325	25	782	..	782	1,132	0 13 6	0 14 10	1 5 6	25	...	1,075	The former jama was very light, but the improvement made since last settlement does not justify our going as high as revenue rates.
631	13	344	..	344	988	0 7 1	0 8 8	1 8 9	32	...	565	Exactly similar to the last which it adjoins.
100	3	255	..	255	358	1 3 0	1 4 1	1 12 2	5	2	456	
530	4	886	..	886	1,420	1 1 10	1 2 8	1 14 0	27	9	1,697	
151	13	67	..	67	231	0 1 3	0 5 11	1 4 4	9	..	94	The present jama is very light being only Rs. 40. Soil bad, kalarashi and rapar. People very poor. Has suffered from floods. It was impossible to assess higher.
48	13	175	..	175	236	1 4 0	1 6 3	1 14 0	3	8	339	
282	67	142	..	142	491	0 8 0	0 8 8	1 14 0	17	1	294	
398	134	500	..	500	1,027	0 13 10	0 14 6	1 13 10	15	4	950	
1,275	4	87	..	87	1,366	0 1 7	0 1 8	1 10 6	64	5	213	
18	2	17	..	17	37	0 15 11	0 14 8	2 0 0	..	1	35	
621	64	874	..	874	1,549	0 0 10	1 0 6	1 13 5	50	60	1,715	
960	55	534	..	534	1,549	0 9 1	0 9 11	1 12 10	40	55	1,056	
125	34	782	6	788	947	1 5 1	1 14 2	2 4 3	8	94	1,886	A very superior village near Ghazanfargarh. Sugar-cane largely grown. Eleven new wells. Former jama maintained though higher than revenue rates.
637	56	634	892	1,526	2,219	1 12 5	0 14 3	1 4 9	70	594	2,446	Very similar to the foregoing except that it runs more down into the Bet, and gets more sailaba.

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil.	Assessment Circle.	Khalisa, shared or Jagir.	Serial No.	Village.	Highest assessment of			Average demand of last five years.	Estimated demand at the Revenue Rates of.	Proposed assessment.	Total area.	Minhai.		
					1st Settlement.	2nd Settlement.	3rd Settlement.					Lakhiraj.	Banen.	Government Nakli.
				Brought forward										
MUZAFFARGARH TAHSIL.	CHAHI NAHRI.	KHALISA.	311	Chak Nahinwala	112 0 0	136 0 0	104 0 0	104 0 0	178	150	185	...	26	...
			312	Chitwahan ...	865 0 0	1,200 0 0	1,250 0 0	1,304 0 0	2,047	1,750	2,982	...	115	4
			313	Harpallo ...	174 0 0	323 3 2	200 0 0	222 0 0	548	392	2,053	...	65	467
			314	Esanwali ...	1,371 9 9	1,173 11 0	992 0 0	992 0 0	1,370	1,370	1,207	...	67	...
			315	Brahamwali ...	2,109 1 6	2,310 0 0	1,750 0 0	1,851 0 0	1,921	1,960	2,211	...	157	...
			316	Sandila ...	947 0 0	1,130 0 0	1,000 0 0	1,000 0 0	1,665	1,526	1,554	...	77	...
			317	Makhan Bela ..	1,430 15 6	1,391 3 6	1,281 7 3	1,297 0 0	2,178	1,650	3,430	...	164	96
			318	Mochi Wali ...	5,884 0 0	4,050 0 0	3,509 0 0	3,944 0 0	4,230	4,550	6,128	...	405	...
			319	Ganga ...	1,073 0 0	1,140 0 0	1,020 0 0	1,020 0 0	1,748	1,650	2,728	...	126	...
			320	Khan Bela ...	520 0 0	477 0 0	400 0 0	400 0 0	444	480	734	...	17	...
			321	Khakhi ...	2,244 3 3	2,095 9 6	1,769 6 9	1,791 0 0	3,832	2,700	4,732	...	184	...
			322	Jhande Wali ...	680 4 0	880 0 0	850 0 0	850 0 0	1,310	1,310	1,375	...	102	...
			323	Kaudi Bilochan...	614 12 3	677 0 0	486 0 0	492 0 0	716	600	1,052	...	35	...
			324	Patti Drig ...	820 14 0	772 3 9	620 6 0	638 0 0	1,263	850	1,837	...	80	...
			325	Mohri Wala ...	463 0 0	567 0 0	417 0 0	417 0 0	966	900	2,117	...	95	...
			326	Thakran Wala ...	500 0 0	613 0 0	674 8 0	674 0 0	652	652	865	...	49	...
			327	Langrial ...	434 0 0	629 0 0	595 8 0	596 0 0	748	748	986	...	38	...
			328	Alude Wali ...	1,955 0 0	2,201 0 0	2,006 0 0	2,006 0 0	3,341	2,700	4,002	...	276	...
			329	Bhunde Wali ...	359 7 0	347 0 0	350 0 0	477 0 0	910	830	1,781	...	87	...
			330	Kuhillan Wali ...	1,125 5 0	1,300 0 0	1,000 0 0	1,000 0 0	1,782	1,350	1,410	...	100	...
			331	Paunta Malara ...	409 2 0	653 0 0	800 0 0	800 0 0	1,532	1,200	2,316	...	118	...
			332	Basti Jalal ...	382 0 0	577 0 0	565 0 0	565 0 0	1,367	991	1,789	...	93	...
				Carried over ...										

IV—*continued.*

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR.						*Assessment per acre on*			*Add to column 11 Grazing and Date assessment.*			
Uncultivated.		*Cultivated.*										REMARKS.
Culturable waste.	Lately abandoned.	Irrigated.	Unirrigated.	Total.	Total Malguzari lands.	Total area.	Total Malguzari land.	Total land under cultivation.	Grazing land jama.	Date jama.	Grand total.	
58	5	94	2	96	159	0 13 0	0 15 1	1 9 0	3	6	159	Canal supply good, but it gets floods which do a great deal of injury. For this reason only we could not assess up to revenue rates.
1,031	94	1,208	66	1,274	2,399	0 11 2	0 11 8	1 6 5	56	6	1,812	Part of the village is inferior kalar land and it suffers from floods. People poor and in debt. There has been good improvement but we could not go as high as revenue rates.
1,118	44	334	25	359	1,521	0 8 10	0 4 1	1 1 6	40	2	434	Very similar to the last which it adjoins.
191	78	863	8	871	1,140	1 2 2	1 8 3	1 9 2	16	13	1,399	
670	41	917	446	1,363	2,074	0 11 2	0 15 1	1 6 3	60	120	2,140	
478	66	933	..	933	1,477	0 15 9	1 6 0	1 10 2	35	15	1,676	
899	122	1,259	18	1,277	2,298	0 7 8	0 11 6	1 4 8	60	120	1,830	Suffers from floods. Has improved considerably but was in distressed circumstances when settlement began. I could not assess higher.
1,893	353	1,806	2,671	3,977	5,723	0 11 11	0 12 9	1 2 4	100	12	4,662	
819	102	493	1,188	1,681	2,602	0 9 8	0 10 2	0 15 8	70	...	1,720	A superior village which has much improved. It suffers from floods. The increase made is as much as the village could bear.
240	21	90	366	456	717	0 10 6	0 10 9	1 0 10	18	...	498	
1,415	330	2,524	279	2,803	4,548	0 9 2	0 9 6	0 15 5	100	16	2,816	The area was over estimated at measurements for a quantity of land was irrigated by accidental sailab which is now cut of by the erection of the Makhan Bela Bund.
150	88	619	416	1,035	1,273	0 15 3	1 0 6	1 4 3	18	...	1,328	
479	45	408	85	493	1,017	0 9 2	0 9 5	1 3 6	40	...	640	Soil mostly bad kalar and owners very poor. Suffers from floods. Inferior crops grown. I could not assess up to revenue rates.
802	113	745	97	842	1,757	0 7 5	0 7 9	1 0 2	70	9	929	Exactly similar to the last which was formerly a part of it.
1,329	65	543	85	628	2,022	0 6 10	0 7 1	1 6 11	50	...	950	
178	273	365	...	365	816	0 12 1	0 12 9	1 12 7	44	...	696	
386	112	430	...	430	928	0 12 2	0 12 11	1 11 10	50	...	798	
1,527	333	1,866	...	1,866	3,726	0 10 10	0 11 7	1 7 2	93	...	2,793	The soil is generally good but the people are very poor. The former jama was very light. I could not go higher.
811	368	515	...	515	1,694	0 7 5	0 7 10	1 2 9	59	...	889	
279	53	976	2	978	1,310	0 15 4	1 0 6	1 6 1	30	7	1,387	Has improved considerably but was injured by a flood in 1878. I could not increase more than 50 per cent.
1,034	290	874	..	874	2,198	0 8 3	0 8 9	1 0 6	66	...	1,266	Similar to the last but could not bear an increase of more than 50 per cent.
874	40	760	22	782	1,696	0 8 10	0 9 4	1 4 3	50	...	1,041	This village suffers from floods from the Saithal Dhand, mortgages recently on the increase. The village has improved but cannot bear a greater increase.

APPENDIX

Name of Tahsil. MUZAFFARGARH TAHSIL.
Assessment Circle. CHAHI NAHRI.
Khalsa, shared or Jagir. KHALSA.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
			Serial No.	Village.	Highest assessment of 1st Settlement.	Highest assessment of 2nd Settlement.	Highest assessment of 3rd Settlement.	Average demand of last five years.	Estimated demand at the Revenue Rates of.	Proposed assessment.	Total area.	Minhai. Lakhira.	Minhai. Banen.	Minhai. Government Rakh.
				Brought forward										
			333	Kot Shah ...	218 0 0	250 0 0	250 0 0	250 0 0	405	360	598	...	265	...
			334	Kachi Wali ...	860 4 6	950 0 0	850 0 0	850 0 0	1,222	1,222	902	...	128	...
			335	Hassanpur ...	555 4 6	900 0 0	700 0 0	700 0 0	1,161	975	1,538	...	60	...
			336	Dobli ...	43 0 9	200 0 0	150 0 0	150 0 0	287	200	509	...	72	...
			337	Rakba Sarkari ...	234 0 0	550 0 0	300 0 0	394 0 0	906	650	1,027	...	81	...
			338	Daira Waddhú ...	474 5 6	550 0 0	450 0 0	523 0 0	1,328	850	2,156	1	55	328
			339	Phullan Wali ...	269 9 3	427 5 0	418 0 0	418 0 0	395	418	247	...	16	...
			340	Basti Kharak ...	1,464 0 0	1,319 0 0	1,361 0 0	1,361 0 0	1,395	1,681	821	...	50	...
			341	Saindar Pir ...	198 4 6	150 0 0	150 0 0	150 0 0	118	150	108	...	29	...
			342	Tibbi Nunari ...	2,279 12 0	2,500 0 0	2,300 0 0	2,300 0 0	1,807	2,108	2,460	...	1,182	...
			343	Chobara ...	334 5 0	291 10 0	287 0 0	287 0 0	236	287	156	...	12	...
			344	Mahrpur ...	1,054 1 0	1,040 0 0	1,000 0 0	1,000 0 0	707	1,000	580	...	144	...
			345	Chak Sur Wala	206 14 9	183 0 0	153 0 0	153 0 0	125	153	127	...	39	...
			346	Palia Kalrú ...	990 13 0	1,000 0 0	860 0 0	860 0 0	677	774	683	...	234	...
			347	Tal Kachhú ...	836 0 0	1,020 0 0	877 0 0	877 0 0	1,020	1,020	957	...	38	...
			348	Fateh Wala ...	191 8 0	142 9 3	124 0 0	124 0 0	69	80	41	...	2	...
			349	Bhagwat ...	315 0 0	250 0 0	200 0 0	200 0 0	154	144	95	...	10	...
			350	Haji Maitlu ...	451 9 8	167 8 0	148 0 0	148 0 0	466	300	569	5	37	...
				Carried over ...										

IV—*continued.*

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR.						*Assessment per acre on*			*Add to column* 11 *Grazing and Date assessment.*			
Uncultivated.		*Cultivated.*										REMARKS.
Cultivable waste.	Lately abandoned.	Irrigated.	Unirrigated	Total.	Total Malguzari lands.	Total area.	Total Malguzari lands.	Total land under cultivation.	Grazing land Jama.	Date jama.	Grand total.	
115	2	216	...	216	333	0 9 8	1 1 4	1 10 8	6	...	366	Present jama very light. Proprietors lazy syads. Cultivation decreased since the Revenue Survey. One new well. It would not bear a greater increase.
105	7	662	...	662	774	1 5 8	1 9 3	1 12 6	6	6	1,234	
784	56	638	...	638	1,478	0 10 2	0 10 7	1 8 5	42	...	1,017	Soil kalar and bad and it suffers from floods. Has improved but it could not bear a greater increase.
277	7	153	...	153	437	0 6 3	0 7 4	1 4 11	14	...	214	Soil of two wells good the rest bad. Owners with one exception poor. Canal supply deficient. Has improved, slightly but could not stand a greater increase.
427	24	495	...	495	946	0 10 1	0 11 0	1 5 6	22	...	672	Has improved much. Former jama very low. It could not bear a greater increase.
975	77	720	...	720	1,772	0 7 5	0 7 9	1 2 11	52	13	918	On the tail of the Sardarwah, and suffers in consequence. Soil mostly bad rapar. Has improved much, and a large increase has been taken. Former jama very low.
13	7	211	...	211	231	1 11 1	1 12 11	1 15 8	...	3	424	
22	5	744	...	744	771	2 0 9	2 2 11	2 4 2	...	5	1,686	A very superior village equal to those about Khangarh.
4	12	63	...	63	79	1 6 3	1 14 6	2 6 1	...	3	153	Village well above the average; present jama maintained though above revenue rates.
152	72	1,054	...	1,054	1,278	0 13 9	1 10 5	2 0 0	44	43	2,198	A superior sugar-cane village. Some owners are very poor and some land bad. These must get a reduction for their jama is collected with difficulty, but we need not go as low as revenue rates.
3	15	126	...	126	144	1 13 5	1 15 7	2 4 5	...	2	289	A superior village near Kinghar.
35	29	377	...	377	441	1 11 4	2 4 3	2 5 10	...	...	1,000	A superior village near Kinghar. People industrious and well off. Present jama collected with ease. It is therefore maintained, though above revenue rates.
19	1	68	...	68	88	1 3 3	1 11 10	2 4 0	...	...	153	Similar to the last and former jama maintained.
59	15	375	...	375	449	1 2 2	1 11 7	2 1 0	4	1	779	Part is of poor sandy soil and some owners poor, some reduction must be given, but we need not go so low as revenue rates.
322	53	543	...	544	919	1 1 1	1 1 9	1 14 0	38	...	1,058	
2	...	37	...	37	39	1 15 3	2 0 10	2 2 7	...	...	80	Formerly decidedly over assessed though above the average. We need not go so low as revenue rates.
3	...	82	...	82	88	1 8 3	1 11 1	1 12 1	...	1	145	
210	50	267	...	267	527	0 8 5	0 9 1	1 2 0	13	4	317	The village is above the average. Former jama very light. I have more than doubled it, but could get no nearer to revenue rates.

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil.	Assessment Circle.	Khalisa, shared or Jagir.	Serial No.	Village.	Highest assessment of			Average demand of last five years.	Estimated demand at the Revenue Rates of.	Proposed assessment.	Total area.	Minhdi.		
					1st Settlement.	2nd Settlement.	3rd Settlement.					Lakhiraj.	Banca.	Government Bakh.
				Brought forward										
MUZAFFARGARH TAHSIL.			351	Alam Shah ...	749 1 9	607 8 0	588 0 0	588 0 0	449	588	802	...	25	...
	CHARI NAHRI.		352	Joba Jhabail ...	157 2 3	151 6 6	118 0 0	118 0 0	100	100	69	...	14	...
			353	Esan Mahar ...	762 4 9	671 13 0	672 0 0	672 0 0	496	550	466	..	163	...
			354	Mannú Chug ...	88 5 9	78 3 0	78 0 0	78 0 0	49	65	32	...	6	...
			355	Muhammad Kutria ...	615 9 3	632 8 0	632 0 0	632 0 0	555	560	553	...	217	...
			356	Chak Maulvi ...	118 0 0	136 0 0	105 0 0	105 0 0	107	107	86	...	24	...
			357	Muhammad Parihar ...	314 0 0	366 0 0	366 0 0	366 0 0	353	353	368	...	83	...
			358	Sohara Chandia	168 8 6	223 6 0	163 0 0	163 0 0	161	161	144	...	40	...
			359	Nohan Wali ...	1,053 6 0	1,000 0 0	1,050 0 0	1,063 0 0	1,244	1,244	2,379	...	1,299	...
			360	Chhajre Wala ...	72 3 3	66 13 0	68 0 0	68 0 0	67	68	83	...	23	...
			361	Muhammad Daha	151 0 0	160 0 0	160 0 0	176 0 0	176	176	222	...	82	...
			362	Dare Wala ...	99 9 9	84 12 0	71 0 0	71 0 0	30	71	75	...	7	...
			363	Pritam Wala ...	32 6 6	79 12 0	71 0 0	71 0 0	47	60	27	...	2	...
			364	Seri Pakka ...	114 0 0	91 0 0	102 0 0	102 0 0	98	102	94	...	6	...
			365	Sharif Chhajra ...	637 4 9	756 7 0	611 0 0	611 0 0	593	611	1,153	...	778	...
			366	Chibhar Khor 1st	553 7 3	610 0 0	529 0 0	529 0 0	700	627	1,793	...	1,101	...
			367	Chibhar Khor 2nd	292 0 0	370 3 3	311 0 0	311 0 0	225	225	215	...	22	...
			368	Mir Haji ...	649 5 0	800 0 0	700 0 0	700 0 0	612	700	920	...	444	...
			369	Goram Bagram...	978 2 0	1,060 0 0	950 0 0	950 0 0	875	950	1,550	...	862	...
			370	Ghazi Gopang ...	226 3 6	200 0 0	180 0 0	180 0 0	133	180	206	...	128	...
			371	Ahmad Petafi ...	285 8 0	250 0 0	200 0 0	200 0 0	127	200	144	...	28	...
			372	Maluk Chanar ...	432 7 6	400 0 0	250 0 0	350 0 0	344	350	356	...	148	...
			373	Basti Jarh ...	...	1,816 0 0	1,796 0 0	1,796 0 0	1,409	1,500	2,308	...	794	83
			374	Basti Lunda ...	...	1,845 7 9	767 0 0	767 0 0	521	560	1,749	...	217	73
			375	Basti Sandila ...	...	1,157 3 0	1,104 0 0	1,164 0 0	857	900	928	...	82	...
			376	Basti Arbi ...	...	641 14 6	566 0 0	566 0 0	498	498	1,046	...	472	...
			377	Kinjhar	...	1,998 1 11	1,857 2 0	1,857 0 0	1,331	1,715	1,426	3	343	...
				Carried over ...										

No. IV—*continued.*

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR.						*Assessment per acre on*			*Add to column 11 Grazing and Date assessment.*			
Uncultivated.		*Cultivated.*										REMARKS.
Culturable waste.	Lately abandoned.	Irrigated.	Unirrigated.	Total.	Total Malguzari lands.	Total area.	Total Malguzari lands.	Total land under cultivation.	Grazing land jama.	Date jama.	Grand total.	
17	4	256	...	256	277	1 15 3	2 2	0 2 5 0	...	6	594	A superior sugar-cane village. Former jama maintained though above average.
1	...	54	...	54	55	1 7 2	1 13	1 1 13 8	...	...	100	
17	12	274	...	274	303	1 2 1	1 13	1 2 0 1	...	3	553	Required relief but it was not necessary to go as low as revenue rates.
...	...	26	...	26	26	2 0 6	2 8	0 2 8 0	...	...	65	Similar to the last.
26	8	302	...	302	336	1 0 3	1 10	8 1 13 8	...	11	571	
4	1	57	...	57	62	1 3 11	1 11	7 1 14 1	...	...	107	
93	4	188	...	188	285	0 15 4	1 3	10 1 14 1	5	...	358	
18	...	86	...	86	104	1 1 11	1 8	9 1 13 11	...	...	161	
255	29	696	...	696	980	0 8 4	1 4	4 1 12 7	30	...	1,274	
13	7	40	...	40	60	0 13 1	1 2	2 1 11 2	...	...	68	
27	19	94	...	94	140	0 12 8	1 11	2 1 13 11	2	2	180	A very poor village. Soil bad. Jama collected with difficulty. No increase possible. Much above the average.
15	5	48	...	48	68	0 15 2	1 0	8 1 7 8	...	...	71	
...	...	25	...	25	25	2 3 7	2 6	5 2 6 5	...	...	60	
29	6	53	...	53	88	1 1 4	1 2	7 1 14 10	2	...	104	
30	22	323	..	323	375	0 8 6	1 10	1 1 14 3	15	4	630	
287	17	393	...	393	697	0 5 7	0 14	10 1 9 6	30	11	668	A very inferior village. Soil bad kalar. People poor and in debt. Sales and mortgages many. Still the village has improved and can bear an increase but not up to revenue rates.
15	5	114	59	173	193	1 0 9	1 2	8 1 4 10	...	3	228	
130	19	327	...	327	476	0 12 2	1 7	6 2 2 3	16	7	723	A village above the average. Present jama maintained though above revenue rates. It is collected with ease.
130	70	488	...	488	688	0 9 10	1 6	1 1 15 2	15	4	969	Above the average. Present jama collected with ease. Therefore it is maintained though above the revenue rates.
5	2	71	...	71	78	0 14 0	2 4	11 2 8 7	...	...	180	Ditto ditto.
47	1	68	...	68	116	1 6 2	1 11	7 2 15 1	...	...	200	Ditto ditto.
16	3	189	...	189	208	0 15 9	1 10	11 1 13 8	..	...	350	
311	69	778	...	778	1,158	0 12 4	1 4	9 1 14 10	38	11	1,549	Near the town of Kanghar. Some land very good near the town, but that at a distance is poor. People badly off and jama collected with difficulty. Reduction must be given, but we need not go as low as revenue rates, because the village is above the average.
357	71	309	...	309	737	0 9 5	0 12	2 1 13 0	21	3	584	
305	46	495	...	495	846	0 15 6	1 1	0 1 13 1	36	43	979	
264	26	284	...	284	574	0 7 7	0 14	0 1 12 1	15	30	543	
324	34	722	...	722	1,080	1 3 3	1 9	5 2 6 0	30	108	1,853	A superior village with a considerable town. Well situated as regards markets. Some people very poor and some land very bad. It was necessary to give relief to these but not go as low as revenue rates.

1	2	3	4	5	6	7	8	9	10	Proposed assessment.
Name of Tahsil.	Assessment Circle.	Khalisa, shared or Jagir.	Serial No.	Village.	Highest assessment of 1st Settlement.	Highest assessment of 2nd Settlement.	Highest assessment of 3rd Settlement.	Average demand of last five years.	Estimated demand at the Revenue Rates of.	
				Brought forward						
MUZAFFARGARH TAHSIL.	CHAH NAHRI.	KHALISA.	351	Alam Shah ...	749 1 9	607 8 0	588 0 0	588 0 0	449	588
			352	Joba Jhabail ...	157 2 3	151 6 6	118 0 0	118 0 0	100	100
			353	Esan Mahar ...	762 4 9	671 13 0	672 0 0	672 0 0	496	550
			354	Mannú Chug ...	88 5 9	78 3 0	78 0 0	78 0 0	49	65
			355	Muhammad Kutria ...	615 9 3	632 8 0	632 0 0	632 0 0	555	560
			356	Chak Maulvi ...	118 0 0	136 0 0	105 0 0	105 0 0	107	107
			357	Muhammad Parihar ...	314 0 0	366 0 0	366 0 0	366 0 0	353	353
			358	Sohara Chandia	168 8 6	223 6 0	163 0 0	163 0 0	161	161
			359	Nohan Wali ...	1,053 6 0	1,000 0 0	1,050 0 0	1,063 0 0	1,244	1,24
			360	Chhajre Wala ...	72 3 3	66 13 0	68 0 0	68 0 0	67	6
			361	Muhammad Daha	151 0 0	160 0 0	160 0 0	176 0 0	176	17
			362	Dare Wala ...	99 9 9	84 12 0	71 0 0	71 0 0	90	
			363	Pritam Wala ...	32 6 6	79 12 0	71 0 0	71 0 0	47	
			364	Seri Pakka ...	114 0 0	91 0 0	102 0 0	102 0 0	98	1
			365	Sharif Chhajra ...	637 4 9	756 7 0	611 0 0	611 0 0	593	
			366	Chibhar Khor 1st	553 7 8	610 0 0	529 0 0	529 0 0	700	
			367	Chibhar Khor 2nd	292 0 0	370 3 3	311 0 0	311 0 0	225	
			368	Mir Haji ...	649 5 0	800 0 0	700 0 0	700 0 0	612	
			369	Goram Bagram...	973 2 0	1,060 0 0	950 0 0	950 0 0	875	
			370	Ghazi Gopang ...	226 3 6	200 0 0	180 0 0	180 0 0	133	
			371	Ahmad Petafi ...	285 8 0	250 0 0	200 0 0	200 0 0	127	
			372	Maluk Chanar ...	432 7 6	400 0 0	250 0 0	250 0 0	344	
			373	Basti Jarh ...	...	1,816 0 0	1,796 0 0	1,796 0 0	1,409	
			374	Basti Lunda ...	...	1,845 7 9	767 0 0	767 0 0	521	
			375	Basti Sandila ...	...	1,167 3 0	1,104 0 0	1,164 0 0	857	
			376	Basti Arbi ...	...	641 14 6	566 0 0	566 0 0	498	
			377	Kinjhar	...	1,998 1 11	1,857 2 0	1,857 0 0	1,331	
				Carried over ...						

20	21	22	23	24	25	26	27
		Assessment per acre on			Add to column 11 Grazing and Date assessment.		
Total.	Total Malguzari lands.	Total area.	Total Malguzari lands.	Total land under cultivation.	Grazing land jama.	Date jama.	Grand total.
256	2771	18	3 2	2 0 2	8 0	...	0	894
54	881	7	2 1 12	1 1 12	8	...	...	
174	3021	2	1 1 12	1 2 0	1	...	8	
	262	0	6 2	8 0 2	8 0	...	...	84
	2361	0	3 1 10	3 1 12	8	...	11	871
	621	3	11 1 11	7 1 16	1	...	...	107
	2850	18	6 1	8 10 1	16 1	...	5	
	1041	1	1 1 1	8 9 1	12 11	...	...	
	3000	8	4 1	4 4 1	12 7	...	...	
	6000	12	1 1	2 2 1	11 2	...	80	1,2
	1400	12	3 1	1 2 1	11 2	...	...	
	6000	18	2 1	0 3 1	7 8	...	2	
	2522	3	7 2	6 5 2	6 8	...	...	
	841	1	4 1	2 7 1	14 14	...	2	
	3	8	6 1	10 1 1	16 2		15	4
	6	5	7 0	16 10 1	9 6		30	11
		0	2 1	2 2 1	4 10			
		12	2 1	7 6 2	2 8			

REMARKS.

A superior sugar-cane village. Former jama maintained though above average.

Required relief but it was not necessary to give the low as revenue rates

Similar to the last.

A very poor village. Still land. Jama collected with difficulty. No increase possible. Much above the average.

A very inferior village. Still land ... [illegible] ... cannot bear an increase nor even up to revenue rates.

... village above the ... [illegible] ... maintained ... [illegible] ... 2 annas

... [illegible] ... 4 ...

R.K.S.

e the last of which
y a part.
ght but people poor
cted with difficulty.
sess higher.

h has deteriorated.
ted and jama col-
difficulty. Sales and
frequent. The jama
duced to Rs. 2,404 in
cannot now be raised.

instances, no reason
g the present jama.
iorated in cultivated
new well. Land poor.
sion given is sufficient.
village. Former jama
at we cannot raise it to
ates.

sugar-cane village which
de much improvement.
jama collected with ease.
maintained it though
evenue rates.
n and the number of wells
d slightly and a small in-
possible, but the land is
d people in debt and pre-
ma collected with difficulty.
we cannot go up to reve-
ates.

erior village which has im-
ved but some people are poor
former jama is light, I can-
go higher.

village has improved but the
ople are poor. Some of the
nd is very bad. Though present
ma is very light, it is collected
ith difficulty. The village can-
ot bear a greater increase.

is village has improved. Some
of the people are very poor.
Former jama though light is
collected at times with difficulty.
The increase taken is sufficient.
superior village which was in low
circumstances at the beginning of
settlement, but which has now im-
proved. Some proprietors are very
poor and the village suffers from
flood.

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Name of Tahsil.	Assessment Circle.	Khalisa, shared or Jagir.	Serial No.	Village.	Highest assessment of			Average demand of last five years.	Estimated demand at the Revenue Rates of.	Proposed assessment.	Total area.	Minhái.		
					1st Settlement.	2nd Settlement.	3rd Settlement.					Lakhiraj.	Banjar.	Government Rakh.
				Brought forward										
MUZAFFARGARH TAHSIL.	CHASH NAHRI.	KHALISA.	387	Chabakpur ...	...	1,769 0 0	1,700 14 0	1,701 0 0	1,902	1,550	1,962	...	648	...
			37	Valwat ...	786 5 6	842 13 0	745 0 0	745 0 0	1,070	902	1,235	...	782	...
			380	Esa Bhaba ...	680 0 0	550 0 0	442 0 0	464 0 0	363	363	660	...	42	...
			381	Usman Kuria ...	3,166 15 6	3,141 0 0	2,750 0 0	2,404 0 0	3,064	2,404	2,882	...	136	...
			382	Chak Shori ...	..	44 10 0	45 0 0	45 0 0	47	47	29	...	3	...
			384	Chak Isa Bhaba	2 2 6	7 6 0	13 0 0	13 0 0	9	13	23	...	1	...
			384	Ismail Shah ...	81 9 0	76 0 0	61 0 0	61 0 0	28	40	113	...	57	...
			385	Núr Muhammad Bhaba	61 7 0	72 4 0	60 0 0	60 0 0	120	90	234	...	6	...
			386	Ghazil Shah ...	197 5 9	220 0 0	180 0 0	180 0 0	168	180	218	...	46	...
			387	Kabul Chhajra ...	50 4 4	68 0 0	65 0 0	65 0 0	78	65	142	...	3	...
			388	Abriud ...	302 6 9	247 1 9	254 0 0	254 0 0	295	295	401	...	22	...
			389	Khokhar ...	969 11 9	1,100 0 0	1,050 0 0	1,050 0 0	944	1,050	759	...	46	...
			390	Dewala ...	505 14 0	505 14 0	544 0 0	609 0 0	894	720	1,800	...	60	...
			391	Tal Jalwala ...	146 4 0	330 0 0	240 0 0	240 0 0	243	243	232	...	11	...
			392	Chak Kalu Wali	19 3 0	18 12 0	17 0 0	17 0 0	37	37	39	...	3	...
			393	Kalu Wali ...	218 1 9	211 4 0	153 9 0	183 0 0	196	196	122	..	9	...
			394	Manka Bhutta ...	1,551 0 0	2,000 0 0	1,850 0 0	1,858 0 0	2,776	2,476	3,168	...	344	...
			395	Kabirwala ...	...	22 0 0	21 0 0	21 0 0	23	23	23	...	1	...
			396	Bet Rai Ali ...	1,489 0 0	1,814 0 0	1,769 0 0	1,769 0 0	2,369	1,944	2,553	...	191	...
			397	Kalan Shah ...	1,072 0 0	796 0 0	611 0 0	619 0 2	909	909	1,334	...	581	...
			398	Miranpur ...	1,426 12 0	1,572 10 9	1,641 6 0	1,734 0 0	2,661	2,300	3,024	...	130	...
			399	Mahra ...	3,406 0 0	4,068 0 0	3,290 0 0	3,290 0 0	4,332	3,700	6,160	35	261	...
				Carried over ...										

No. IV—*continued.*

16	17	81	19	20	21	22	23	24	25	26	27	28
Malguzari including Jagir.						*Assessment per acre on.*			*Add to column 11 Grazing and Date assessment.*			
Uncultivated.		*Cultivated.*										
Culturable waste.	Lately abandoned.	Irrigated.	Unirrigated.	Total.	Total malguzari lands.	Total area.	Total malgozari lands.	Total land under cultivation.	Grazing land jama.	Date jama.	Grand total.	Remarks.
500	77	692	...	692	1,319	0 12 7	1 2 10	2 3 10	62	14	1,626	Exactly similar to the last of which it was formerly a part.
399	61	598	...	598	1,058	0 7 10	0 13 8	1 8 4	46	10	958	Former jama light but people poor and jama collected with difficulty. I could not assess higher.
339	15	188	76	264	618	6 8 10	0 9 5	1 6 0	18	76	457	
765	197	1,784	...	1,784	2,746	0 13 4	0 14 0	1 5 7	48	85	2,537	A village which has deteriorated. Land exhausted and jama collected with difficulty. Sales and mortgages frequent. The jama had to be reduced to Rs. 2,404 in 1875-76 and cannot now be raised.
...	1	25	...	25	26	1 9 11	1 2 11	1 14 1	...	11	556	
15	...	7	...	7	22	0 9 1	0 9 5	1 13 8	...	2	15	In good circumstances, no reason for reducing the present jama.
40	1	15	...	15	56	0 5 8	0 11 5	2 10 8	2	9	51	Village deteriorated in cultivated area. One new well. Land poor. The reduction given is sufficient.
161	3	64	...	64	228	0 6 2	0 6 4	1 6 6	5	5	100	An average village. Former jama so light that we cannot raise it to revenue rates.
56	26	87	...	87	169	0 14 5	1 1 0	2 1 1	4	6	190	
66	27	46	...	46	139	0 7 1	0 7 6	1 6 7	2	4	72	
157	28	194	...	194	379	0 11 9	0 12 5	1 8 4	9	2	306	
116	58	539	...	539	713	1 6 2	1 7 7	1 15 2	18	35	1,108	A superior sugar-cane village which has made much improvement. Present jama collected with ease. I have maintained it though above revenue rates.
726	30	484	...	484	1,240	0 8 10	0 9 2	1 7 10	38	12	770	Cultivation and the number of wells increased slightly and a small increase possible, but the land is poor and people in debt and present jama collected with difficulty. Hence we cannot go up to revenue rates.
80	9	132	...	132	221	1 0 9	1 11 7	1 3 9	4	1	248	
12	2	22	...	22	36	0 15 2	1 0 5	1 10 11	...	...	37	
16	1	106	...	106	123	1 7 9	1 9 6	1 13 7	...	...	196	
1,145	145	1,534	...	1,534	2,824	0 12 6	0 14 0	1 9 11	65	7	2,548	A superior village which has improved but some people are poor and former jama is light. I cannot go higher.
6	4	12	...	12	22	1 0 0	1 0 9	1 14 8	...	...	23	
1,435	163	1,414	...	1,414	3,462	0 8 9	0 9 0	1 6 0	102	60	2,106	This village has improved but the people are poor. Some of the land is very bad. Though present jama is very light, it is collected with difficulty. The village cannot bear a greater increase.
674	77	506	...	506	1,258	0 7 11	0 11 7	1 12 9	37	119	1,065	
1,034	365	1,495	...	1,495	2,894	0 12 2	0 12 9	1 8 7	70	95	2,455	This village has improved. Some of the people are very poor. Former jama though light is collected at times with difficulty. The increase taken is sufficient.
2,469	1,041	2,383	1	2,384	5,864	0 9 7	0 10 1	1 8 10	174	37	3,911	A superior village which was in low circumstances at the beginning of settlement, but which has now improved. Some proprietors are very poor and the village suffers from flood.

Name of Tahsil: MUZAFFARGARH TAHSIL.
Assessment Circle: CHAK NAHBI.
Khalisa, shared or Jagir: KHALISA.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
					Highest assessment of								Minhái.	
			Serial No.	Village.	1st Settlement.	2nd Settlement.	3rd Settlement.	Average demand of last five years.	Estimated demand at the Revenue Rates of.	Proposed assessment.	Total area.	Lakhiraj.	Banen.	Government Bakh.
				Brought forward										
			400	Gindi Khakhi ...	582 5 0	800 0 0	650 0 0	650 0 0	1,195	850	1,58:	..	90	
			401	Kushak ...	200 0 0	389 0 0	357 0 0	357 0 0	607	410	64	...	31	
			402	Jarh Ratheb ...	609 0 0	700 0 0	600 0 0	600 0 0	1,663	1,200	3,17	..	88	
			403	Hassanpur Kacha	650 0 0	719 0 0	963 0 0	979 0 0	1,653	1,325	3,945	...	119	
			404	Hassanpur ...	338 0 9	216 13 6	261 0 0	261 0 0	297	297	754	...	23	
			405	Basti Jhangar ...	404 3 0	673 9 3	684 0 0	682 0 0	1,117	1,117	1,797	...	85	
			406	Maitla ...	473 0 0	600 0 0	550 0 0	548 0 0	875	722	1,881	...	97	
			407	Shujra ...	236 3 0	300 0 0	300 0 0	300 0 0	727	450	1,442	...	56	
			408	Utera Sandila ...	1,234 0 0	1,220 0 0	1,100 0 0	1,125 0 0	1,919	1,575	2,417	...	96	
			409	Matte Shah ...	69 0 0	60 0 0	80 0 0	80 0 0	143	110	111	...	11	
			410	Khulang ...	418 0 0	390 0 0	350 0 0	350 0 0	1,263	744	2,873	...	88	
			411	Tror Hassanpur	22 0 0	32 0 0	2 0 0	2 0 0	...	...	607	...	21	
			412	Ghialpur ...	401 0 0	390 0 0	300 0 0	307 0 0	1,012	676	2,877	...	108	
			413	Manikpur ...	615 0 0	750 0 0	650 0 0	650 0 0	1,726	1,220	3,513	...	3	
			414	Massa Sandila ...										
			415	Mahinwal Daha	425 11 9 62 4 6	410 0 0 45 0 0	350 0 0 36 0 0	350 0 0 36 0 0	457 96	457 72	1,073 160	...	31 13	
			416	Habib Dauna ..										
			417	Bet Musa Malana	120 14 3 112 2 6	97 2 0 47 11 9	92 0 0 69 0 0	92 0 0 84 0 0	130 148	125 117	149 421	...	12	
				Total ...	1,56,557 5 7	1,56,187 13 2	1,38,847 2 0	1,38,395 15 11	1,53,591	1,53,149	2,88,060	281	28,923	
				Grand Total ...	2,47,351 5 6	2,50,568 11 8	2,18,325 14 3	2,24,563 3 11	2,52,135	2,51,302	5,91,239	479	1,51,229	

IV.—*continued.*

16	17	18	19	20	21	22	23	24	25	26	27	28
MALGUZARI INCLUDING JAGIR.						*Assessment per acre on*			*Add to column 11 Grazing and Date assessment.*			
Uncultivated.		*Cultivated.*										REMARKS.
Culturable waste	Lately abandoned	Irrigated	Unirrigated	Total	Total malguzari land	Total area	Total malguzari land	Total land under cultivation	Grazing land jama	Date jama	Grand Total	
493	296	704	...	704	1,493	0 8 7	0 9 1	1 3 4	39	4	893	Former jama very light. The people are very poor, and bad land preponderates. It was not possible to go as high as revenue rates.
142	126	345	...	345	613	0 10 2	0 10 8	1 3 0	13	...	423	A poor village which has improved but little. Former jama very light.
1,334	402	956	...	956	2,692	0 6 11	0 7 1	1 4 1	60	...	1,260	This is a superior village which has much improved. The only reason for not assessing up to revenue rates is the poverty of the people and the lightness of former jama.
1,336	235	934	...	934	2,505	0 8 1	0 8 6	1 6 8	60	...	1,385	Very similar to the last. Sales numerous.
515	41	165	...	165	721	0 6 4	0 6 7	1 12 10	28	2	327	This with the last was part of MALWA and is very similar to it.
953	138	621	...	621	1,712	0 10 5	0 10 5	1 12 9	55	7	1,179	
1,018	67	516	183	699	1,784	0 6 2	0 6 6	1 0 6	40	3	765	This village has improved much, but it is mainly dependent in sailaba and its canal supply is uncertain because the lands are high.
911	69	388	18	406	1,386	0 4 11	0 5 2	1 1 9	35	4	489	A medium village which has improved much. The owners are very poor.
1,153	62	1,061	45	1,106	2,321	0 10 5	0 10 10	1 6 9	90	9	1,674	A village which has improved much. Some proprietors very poor and the former jama very light. It could not stand a greater increase.
7	4	89	...	89	100	0 15 10	1 1 7	1 3 9	...	3	113	A good village with no room for further improvement. It was impossible to assess higher.
965	134	732	12	744	1,843	0 6 2	0 6 6	1 0 0	55	2	801	The proposed jama is more than double the former. No greater increase was possible.
585	...	...	...	...	585	...	...	...	29	...	29	
821	305	594	...	594	1,720	0 5 11	0 6 3	1 2 3	59	3	788	The proposed jama is more than double the former.
1,365	159	966	...	966	2,490	0 7 0	0 7 10	1 4 2	50	...	1,270	In this village also I have taken as great an increase as was safe. The people are poor.
717	26	269	30	299	1,042	0 6 10	0 7 0	1 8 5	37	3	497	
56	9	50	27	77	142	0 7 2	0 8 1	0 15 0	3	...	75	This village should have been placed in the bet circle. The area recorded as canal is really sailaba from the Dinga branch.
42	14	74	7	81	137	0 13 5	0 14 7	1 8 8	...	...	125	
229	40	31	115	146	415	0 4 5	0 4 6	0 12 10	13	...	130	
60,000	12,606	83,362	9,508	92,870	1,91,838	0 11 1	0 12 9	1 10 5	5,263	9,173	1,67,585	
[illegible]	18,240	1,26,709	43,477	1,70,186	3,67,103	0 8 1	0 12 0	1 7 8	9,488	11,101	2,71,891	

Name of Tahsil: ALIPUR TAHSIL.
Assessment Circle: BET CHENAB
Khalisa, shared or Jagir: KHALISA.

Serial No.	Village.	Highest assessment of 1st Settlement.	Highest assessment of 2nd Settlement.	Highest assessment of 3rd Settlement.	Average demand of last five years.	Estimated demand at the Revenue Rates of.	Proposed assessment.	Total area.	Minhái. Lakhiraj.	Minhái. Banen.	Minhái. Government Rakh.	MALGUZARI. Uncultivated. Culturable waste.	MALGUZARI. Uncultivated. Lately abandoned.
1	Tror Shahpur ...	..	194 0 0	266 0 0	867 0 0	876	924	2,85[illegible]	...	444	...	1,477	108
2	Muradpur ..	1,362 0 0	1,080 0 0	810 0 0	1,662 0 0	1,811	1,438	2,263	..	131	...	946	216
3	Rapri ..	298 0 0	396 0 0	249 0 0	894 0 6	345	322	693	...	301	...	104	2
4	Manikwali ..	79 0 0	79 0 0	98 0 0	188 0 0	194	194	806	..	286	...	336	1
5	Bana Roya ..	776 13 0	700 0 0	600 0 0	705 9 7	712	648	1,568	.	215	...	699	66
6	Miranpur ..	298 1 0	342 0 0	126 0 0	584 9 7	668	636	2,104	...	314	...	1,215	18
7	Pakka Shah Syad-Ali	52 0 0	75 0 0	80 0 0	80 0 0	65	70	393	...	36	...	279	42
8	Kharwala ...	153 5 0	257 0 0	300 0 0	300 0 0	342	300	537	...	102	...	139	42
9	Billu Sandila ..	1,246 7 6	1,450 0 0	1,450 0 0	1,450 0 0	1,798	1,798	3,043	..	181	...	1,126	212
10	Faizpur ..	1,402 14 0	766 0 0	500 0 0	407 0 0	684	677	1,518	...	598	...	269	16
11	Binda Ishàq ..	957 0 0	769 0 0	769 0 0	769 0 0	1,009	940	3,089	...	112	...	1,849	173
12	Chak Dadda ...	19 0 0	28 0 0	190 0 0	210 0 0	152	161	915	...	146	...	600	26
13	Bet Panuhan ..	1,072 0 0	946 0 0	...	993 9 0	669	709	3,098	...	1,064	...	1,329	5
14	Khorora Fazil Muhammad ...	1,105 0 0	615 0 0	756 0 0	756 0 0	709	710	1219	.	71	...	494	54
15	Ghagrewali ...	262 0 0	444 0 0	726 0 0	726 0 0	728	726	2539	...	263	...	1,647	71
16	Madwala ...	221 0 0	187 0 0	249 0 0	249 0 0	470	470	3331	...	114	893	1,979	55
17	Damor Wala Janubi	980 0 0	1,022 0 0	750 0 0	2,026 8 0	2,064	2,282	10,179	...	1,126	2,210	4,561	382
18	Makhan Bela ...	421 6 3	436 15 0	607 15 0	1,003 0 0	1,143	1,109	3,911	...	13,69	...	1,429	128
19	Shakar Bela ...	259 12 0	600 0 0	350 0 0	294 0 0	291	291	738	...	24	...	420	20
20	Musallam Chhajra	146 5 0	241 0 0	275 0 0	359 0 0	361	319	628	..	63	...	254	26
21	Bet Nùrwala ...	...	184 0 0	90 0 0	199 0 0	223	223	1,809	.	399	...	998	202
22	Kundrala ...	1,414, 0 0	900 0 0	701 0 0	1,172 0 0	1,241	1,166	5,596	...	1,710	...	2,673	96
23	Kachi Lal ...	..	..	20 0 0	271 0 0	253	253	2,113	...	10	...	1,797	68
24	Serki ...	4,488 0 0	2,385 0 0	2,409 0 0	1,277 0 0	1,451	1,490	4,911	...	1,055	572	2,077	194
25	Tibba Burra ...	...	1,023 0 0	828 0 0	480 0 0	555	573	1,134	...	331	...	262	28
26	Marian ...	396 0 0	800 0 0	801 0 0	785 0 0	638	638	1,645	...	85	...	906	265
27	Khanpur Narakka	2,126 0 0	1,423 0 0	1,280 0 0	1,296 0 0	1,173	1,346	2,474	...	622	...	917	42
28	Bet Isa ...	310 0 0	240 0 0	175 0 0	227 0 0	180	180	1,818	...	133	...	985	38
29	Bet Mullanwalli	435 0 0	300 0 0	875 0 0	743 0 0	847	817	6,115	...	824	...	4,166	422
30	Bet Shikra ...	..	..	...	25 0 0	60	60	430	...	1	...	263	...
31	Parara ...	1,903 0 0	988 0 0	700 0 0	577 0 0	466	502	4,206	...	2,019	595	1,104	82
32	Kach Pak ...	528 0 0	235 0 0	141 0 0	220 0 0	215	227	1,000	..	165	...	626	24
33	Bet Burra ...	291 0 0	262 0 0	264 0 0	188 0 0	294	294	1,884	...	449	...	1,173	11
34	Bet Chana ...	1,048 0 0	350 0 0	300 0 0	192 0 0	298	229	1,440	...	310	...	861	48
35	Tror Jhandewali	173 0 0	173 0 0	130 0 0	130 0 0	162	162	186	...	5	...	13	10
36	Khangarh Dome	4,136 0 0	2,800 0 0	1,871 0 0	514 0 0	627	554	2,045	...	145	...	1,315	125
37	Azmatpur ...	790 0 0	967 0 0	667 0 0	1,347 0 0	1,247	1,241	6,430	...	525	...	4,569	468
	Total ...	29,099 15 9	24,657 15 0	20,903 15 0	23,666 11 2	24,571	24,581	90,138	...	15,743	4,370	46,017	3,717

IV—*continued.*

18	19	20	21	22	23	24	25	26	27	28
Including Jagir.				*Assessment per acre on*			*Add to column 11 Grazing and date assessment.*			
Cultivated.										
Irrigated	Unirrigated	Total	Total Malguzari land	Total area	Total Malguzari land	Total land under cultivation	Grazing land jama	Date jama	Grand Total	Remarks.
31	781	812	2,394	0 5 3	0 6 2	1 2 2	79	..	1,003 0 0	Land very good. People well-to-do. Jama collected with ease.
551	419	970	2,132	0 10 2	0 10 10	1 7 9	58	32 0 0	1,528 0 0	Adjoins foregoing which it resembles in every way a superior village.
74	212	286	392	0 7 5	0 13 1	1 2 0	5	1 0 0	328 0 0	Two wells fallen in since measurements.
..	183	183	520	0 3 10	0 6 0	1 1 0	17	..	211 0 0	
81	507	588	1,353	0 6 7	0 7 2	1 1 6	38	2 0 0	688 0 0	Has an inland part containing four wells of inferior soil. The sailaba part is exhausted by floods, hence I assessed below rates.
91	469	560	1,790	0 4 10	0 5 8	1 2 2	62	9 0 0	707 0 0	
29	7	36	357	0 2 10	0 3 2	1 15 1	16	3 8 0	89 8 0	
103	151	254	435	0 8 11	0 11 0	1 2 11	9	..	309 0 0	
310	1,214	1,524	2,862	0 9 5	0 10 1	1 2 11	67	..	1,865 0 0	
8	627	635	920	0 7 2	0 11 9	1 1 1	14	..	1,691 0 0	
122	83	205	2,977	0 4 10	0 5 1	0 15 9	101	6 0 0	1,047 0 0	Village much exposed to floods, and intersected by Dhands. One well in work at measurements. Now useless.
...	143	143	769	0 2 10	0 3 4	1 2 0	31	..	192 0 0	
...	630	630	2,034	0 3 7	0 5 6	1 2 0	70	..	779 0 0	
130	470	600	1,148	0 9 4	0 9 11	1 2 11	27	..	737 0 0	
225	333	558	2,276	0 4 7	0 5 1	1 4 10	86	1 0 0	815 0 0	
229	61	290	2,324	0 2 3	0 3 3	1 9 11	153	..	623 0 0	
255	1,645	1,900	6,843	0 4 0	0 6 3	1 3 2	300	..	2,582 0 0	A Bet village of very superior soil. Proprietors in fair circumstances. Hence I fixed the sailaba rate Re. 1-2-0 instead of Re. 1-1-0 which makes the increase.
108	857	965	2,542	0 4 6	0 6 11	1 2 5	79	..	1,188 0 0	
..	274	274	714	0 6 4	0 6 6	1 0 11	22	..	313 0 0	
171	114	285	565	0 8 2	0 9 4	1 1 11	14	..	332 0 0	Area of wells very small.
...	210	210	1,410	0 1 11	0 2 6	1 1 0	60	..	283 0 0	
52	1,066	1,118	3,886	0 3 4	0 4 10	1 1 6	125	37 0 0	1,328 0 0	On the bank of the Chenab. Its condition and area vary extremely. Great room for extension of cultivation. The jama is fluctuating. I thought that rates slightly lower than revenue rates, would encourage the spread of cultivation.
...	238	238	2,103	0 1 11	0 1 11	1 1 0	93	..	346 0 0	
543	560	1,103	3,284	0 4 10	0 7 3	1 5 1	109	8 0 0	1,607 0 0	
212	301	513	803	0 8 1	0 11 5	1 1 11	15	5 0 0	593 0 0	
191	198	389	1,560	0 6 2	0 6 7	1 10 3	59	8 0 0	705 0 0	
631	261	892	1,852	0 8 1	0 10 9	1 6 4	48	61 0 0	1,355 0 0	
2	168	170	1,185	0 2 2	0 2 5	1 0 11	51	..	231 0 0	
265	368	633	5,291	0 2 3	0 2 6	1 4 8	150	2 0 0	969 0 0	
...	56	56	419	0 2 5	0 2 4	1 1 2	30	..	90 0 0	
288	117	405	1,591	0 1 11	0 5 1	1 3 10	59	..	561 0 0	Soil good. The increase in the proposed jama above revenue rate is due to the adoption of a Jhalar sailaba rate as suggested by Settlement Commissioner.
61	124	185	835	0 3 8	0 4 4	1 3 8	33	1 0 0	261 0 0	
35	216	251	1,435	0 2 6	0 3 3	1 2 11	59	7 0 0	360 0 0	
73	148	221	1,130	0 2 7	0 3 3	1 0 7	23	16 0 0	268 0 0	People impoverished from losses by diluvion. Jama has fallen in consequence from Rs. 1,048 to Rs. 274. On the remainder of the village no silt has been deposited for a long time. Jama collected with difficulty.
...	152	152	181	0 13 11	0 14 4	1 1 1	..	..	162 0 0	
143	303	446	1,903	0 4 4	0 4 10	1 3 11	100	30 0 0	684 0 0	Impoverished by losses from diluvion. People poor.
330	626	956	5,905	0 3 1	0 3 4	1 4 9	200	..	1,441 0 0	
8,344	15,042	20,386	70,120	0 4 4	0 5 7	1 3 4	2,462	229 8 0	27,272 8 0	

Name of Tahsil: ALIPUR TAHSIL. Assessment Circle: BET INDUS. Khallsah, shared or Jagir: KHALISAH

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
			Serial No.	Village	Highest assessment of 1st Settlement	Highest assessment of 2nd Settlement	Highest assessment of 3rd Settlement	Average demand of last five years	Estimated demand at the Revenue Rates of	Proposed assessment	Total area	Mishai: Lakhiraj	Mishai: Banen	Mishai: Government Rakh	MALGUZARI: Uncultivated: Culturable waste	MALGUZARI: Uncultivated: Lately abandoned
			38	Bet Shahidi Khan	196	380	380	217	117	117	1,660	...	75	175	988	323
			39	Bet Lundi ...	...	...	158	179	162	184	9,499	...	4,625	2,498	2,183	20
			40	Behindi Kutrai ...	67	133	133	116	94	94	3,214	...	283	807	1,994	36
			41	Bet Sial ...	128	187	100	100	238	216	1,395	...	28	319	798	50
			42	Bibipur Chhajra ...	74	94	59	59	142	133	943	...	23	306	484	19
			43	Bibipur Damar ...	74	133	91	91	245	227	1,274	...	46	164	857	16
			44	Bet Daryai ...	...	...	42	135	56	64	3,767	...	801	704	2,202	...
			45	Fatehpur (Shomali)	43	59	45	45	65	45	81	...	1	...	17	4
			46	Bakaini ...	989	1,111	952	986	2,315	1,868	10,852	...	374	1,719	6,784	366
			47	Bet Mir Hazar Khan ...	856	745	600	747	507	535	7,373	...	476	2,696	3,336	23
			48	Binda Mahrban ...	...	...	42	48	87	99	2,814	...	589	...	2,106	32
			49	Bet Warian Wala	679	780	551	551	1,266	845	3,156	...	110	...	1,895	51
			50	Rampur ...	...	...	198	354	385	411	19,593	...	12,489	...	6,669	35
			51	Kot Ratta ...	13	141	328	275	192	192	3,841	...	511	446	2,402	32
			52	Chhina Malana ...	37	33	23	21	27	27	1,564	...	54	575	800	12
			53	Bet Suleman ...	495	898	354	372	204	197	1,609	...	214	...	991	12
			54	Jatoi (Jannubi) ...	2,667	1,813	1,335	1,421	931	1,037	2,835	...	1,171	...	679	12
				Carried over ...												

IV—*continued.*

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR.				*Assessment per acre on*			*Add to column 11 Grazing and date assessment*			
Cultivated										REMARKS.
Irrigated	Unirrigated	Total	Total Malguzari land	Total area	Total Malguzari land	Total land under cultivation	Grazing land Jama	Date Jama	Grand Total	
66	33	99	1,410	0 1 2	0 1 4	1 2 11	66	...	183	A very superior Bet village. Proprietors rich Rate of former assessment Re. 1-1-9 per acre. For these reasons I did not go as low as revenue rates.
...	173	173	2,376	0 0 3	0 0 11	1 1 0	110	...	294	
7	87	94	2,123	0 0 6	0 0 8	1 0 0	102	...	196	
89	112	201	1,049	0 2 5	0 3 3	1 1 2	12	...	228	The land recorded as canal irrigated was no better than Sailaba. Proprietors poor and village exposed to floods. The area of wells and Jhalars below the average. For these reasons I did not assess up to adopted revenue rates. The rates gave an increase of more than 100 per cent.
65	46	111	614	0 2 3	0 3 4	1 3 2	15	...	148	
85	106	191	1,064	0 2 9	0 3 3	1 3 0	22	...	249	Canal area little better than Sailaba, soil poor and exposed to floods.
...	60	60	2,262	0 0 3	0 0 5	1 1 1	110	...	174	A good Bet village. Proprietors well off, similar to No. 39 and No. 48 which are neighbouring villages. The same rates adopted for all.
13	45	58	80	0 3 11	0 9 0	0 12 5	...	...	45	People poor. Little room for extension of cultivation. Hence did not assess up to revenue rates.
959	650	1,609	8,758	0 2 2	0 3 5	1 2 7	300	4	2,172	The reason for the proposed assessment differing from the revenue rates are (1) that the area recorded as canal irrigated is little better than Sailala. There is no proper canal irrigation in this village though canals pass through it when the Indus is at its highest the canals burst their banks and flood the country. This water is not controllable and should not be treated as canal. It is pure sailab. (?) ; at the rates adopted the old jama is nearly doubled which was as much as the village could bear.
168	277	445	4,201	0 1 2	0 2 0	1 3 2	168	...	723	Soil good. Owners well off.
...	93	93	2,225	0 0 7	0 0 9	1 1 0	107	...	206	See remarks to Bet Daryai, No. 44.
795	...	795	3,046	0 4 4	0 4 6	1 1 0	108	6	959	Village exposed to floods. In the hot weather of 1878 great damage was done. Sales numerous. Proprietors in reduced circumstances owing to criminal cases. Average area of wells low. Former jama light. Village could not bear an increase up to revenue rates.
...	411	411	7,104	0 0 3	0 0 11	1 0 0	335	...	746	A Bet village of good soil owned by a single proprietor in good circumstances.
20	172	192	2,884	0 0 10	0 1 1	1 1 10	135	...	327	
...	29	29	935	0 0 3	0 0 6	0 14 11	45	...	72	
19	199	218	1,895	0 2 0	0 2 3	0 14 5	59	...	256	An inferior Bet village. Lands exhausted and bad ; people very poor.
580	313	893	1,661	0 5 10	0 9 11	1 2 7	80	19	1,136	Near the city of Jatoi, soil good area of wells large. Former jama high. Hence I did not go as low as the revenue rates.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil	Assessment Circle	Khalisah, shared or Jagir	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the Revenue rates of	Proposed assessment	Total area.	Muáfi.			Malguzari	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj.	Banni.	Government Rakh.	Uncultivated	
															Culturable waste.	Lately abandoned.
				Brought forward..												
ALIPUR TAHSIL	Bet Indus	Khalisah	55	Jatoi (Shomali) ...	4,128	2,956	2,885	2,925	2,095	2,524	5,284	..	439	..	2,924	368
			56	Wuddu wala ..	1,294	900	739	739	436	496	1,155	..	185	..	417	102
			57	Valwat ..	279	642	575	539	540	467	2,955	..	259	..	2,126	56
			58	Bhatti wala ..	296	397	421	368	405	356	948	..	63	..	470	21
			59	Jhuggiwala ..	5,354	2,326	1,691	1,569	2,094	2,211	4,827	..	172	..	2,200	166
			60	Kalú wala ..	1,480	321	194	194	896	716	3,077	..	68	..	1,880	126
			61	Kotla Bánd Ali ..	1,337	805	618	618	789	897	1,242	..	45	..	369	9
			62	Mirwala ..	821	492	338	332	322	392	1,515	..	806	..	345	1
			63	Mochi wala ..	2,296	703	684	1,182	911	911	3,260	..	638	..	1,443	214
			64	Mad Sohare Shah..	..	..	..	147	13	13	5,117	..	1,966	1,336	1,813	..
			65	Kachi Bakhshan ..	..	..	88	54	82	71	1,688	..	1,050	..	446	3
			66	Gapol ..	332	121	74	74	162	162	455	..	21	..	261	..
			67	Bosan ..	561	352	252	344	285	285	2,209	..	149	..	1,756	..
			68	Kabir Gopang ..	801	1,205	894	964	1,305	1,115	6,564	..	127	..	4,636	362
				Carried over ...												

IV.—*continued.*

18	19	20	21	22	23	24	25	26	27	28
Including Jagir.				*Assessment per acre on*			*Add to column 11 Grazing and date assessment*			
Cultivated										Remarks.
Irrigated	Unirrigated	Total	Total Malguzari land	Total area.	Total Malguzari land	Total land under cultivation.	Grazing land jama.	Date Jama.	Grand Total.	
1,050	503	1,553	4,845	0 7 8	0 8 4	1 10 0	168	38	2,727	The village required a reduction in consequence of continued losses by floods and the breaking of bunds. I did not go so low as revenue rates because the village had been paying much higher and because the bund has been now rebuilt and a new canal dug through the village, and because the village is near the town of Jatoi
97	354	451	970	0 6 10	0 8 2	1 1 7	30	1	527	A superior sailaba village. Former jama 80 high for the circumstances of the village, but it was not necessary to go as low as revenue rates jama.
86	433	519	2,699	0 2 6	0 2 9	0 14 5	82	...	549	Soil inferior. People poor and criminal, liable to destructive floods. I could not assess up to revenue rates.
33	354	387	385	0 6 0	0 6 5	0 14 9	15	...	371	A sailaba village of poor high land. Only gets irrigated when the Indus is in highest flood. People very poor. I could not assess up to revenue rates.
213	1,976	2,189	4,655	0 7 4	0 7 7	1 0 2	185	...	2,396	This village has been extremely lucky in getting rich alluvial deposits and its soil is very good. People fairly well off. For these reasons I went higher than revenue rates.
56	375	931	3,009	0 3 8	0 3 9	0 12 2	75	...	785	A peculiar village. When the Indus is in highest flood it is well cultivated. When the Indus is low as in 1875, no land is cultivated. The increase on the old jama is very great. The village is eminently suited for a fluctuating jama. This rabi the new jama has been collected with ease. I did not assess up to revenue rates because the increase in the jama would have been so great.
39	783	822	1,197	0 11 7	0 12 0	1 1 6	33	5	940	Similar but better than No. 59 which it adjoins. Former jama very low. Proprietors mostly well off, soil and crops very good.
52	309	361	709	0 4 2	0 3 10	1 1 5	34	...	426	Very superior soil. Proprietors mostly well off.
..	965	965	2,622	0 4 6	0 5 7	0 15 1	100	...	1,011	
..	14	14	1,827	...	0 0 1	0 14 10	113	...	126	
..	87	87	538	0 0 9	0 2 1	0 13 1	17	...	88	Much exposed to floods from the Indus. Soil inferior. Hence I assessed below rates.
7	166	173	434	0 5 8	0 6 0	0 15 0	13	...	175	
...	304	304	2,060	0 2 1	0 2 3	0 15 0	66	...	351	
36	1,406	1,442	6,437	0 2 9	0 2 9	0 12 4	225	...	1,340	Soil poor. Eastern part of the village high and sometimes gets little water. Great room for extension of cultivation. A canal being dug, I fixed the rates for the fluctuating assessment low on purpose to increase cultivation.

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil	Assessment Circle	Khalisah, shared or Jagir	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the Revenue Rates of	Proposed assessment	Total area	Minhdi			MALGUZARI	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government Rakh	Uncultivated: Culturable waste	Uncultivated: Lately abandoned
				Brought forward..												
ALIPUR TAHSIL	BET INDUS	KHALISAH	69	Bet Bagh Shah ..	963	...	26	211	287	287	7,704	..	1,286	2,407	3,397	201
			70	Shahpur ..	2,045	3,264	2,273	1,816	1,115	1,199	5,242	..	324	...	3,640	140
			71	Bet Diwan Sahib ..	15	416	144	339	799	799	12,435	..	1,523	3,336	6,581	167
			72	Khairpur Para ...	1,303	586	1,253	283	584	462	4,980	..	253	954	3,205	108
			73	Bet Mir AhmadJhabail ..	...	668	737	674	1,001	1,001	6,261	..	1,050	1,294	2,638	282
			74	Dhaka ..	4,007	2,197	1,600	1,077	784	826	11,458	..	3,242	2,277	5,098	171
			75	Tibba Nur Gopang.	...	753	590	433	290	272	2,550	..	94	991	1,110	58
			76	Shahwali ..	...	349	228	274	139	139	2,325	..	565	...	1,616	18
			77	Naharwala ..	...	...	382	765	591	591	4,852	..	113	...	3,474	135
			78	Bet Waghwar ..	314	558	757	848	936	936	3,671	..	768	...	1,823	82
			79	Thal Megraj ...	615	867	767	620	487	487	7,325	..	167	2,876	3,457	350
				Total ..	33,659	26,385	25,561	23,181	24,486	24,000	1,33,973	..	37,287	25,874	92,404	5,548
ALIPUR TAHSIL	CHAHI SIIABA	KHALISAH	80	Latti ..	684	888	1,459	1,137	1,129	1,129	4,662	..	165	706	2,615	228
			81	Mithanwali ..	2,518	2,455	1,846	1,844	1,579	1,633	3,669	..	1,206	...	1,003	106
			82	Kotla Mahr Ali ..	935	720	647	647	579	579	2,398	1	105	...	1,617	137
			83	Langarwali ..	3,986	2,500	2,126	2,126	1,496	1,548	7,822	1	563	805	4,619	195
			84	Bazwala ..	507	1,000	1,106	963	989	984	4,262	..	125	...	2,927	333
			85	Muradpur 2nd ..	2,838	2,164	1,531	1,531	1,218	1,212	7,238	..	419	...	5,534	116
			86	Nawan Dera ..	916	1,078	785	785	1,092	1,092	3,757	..	191	...	2,365	67
			87	Nau Abad ..	1,589	1,758	1,284	1,284	1,507	1,482	2,644	.	341	...	909	84
			88	Sultanpur ..	3,320	2,000	2,130	2,155	1,071	1,165	5,614	1	1,156	806	2,736	47
			89	Khanani ..	2,783	2,679	3,100	3,099	1,842	1,885	4,177	27	220	401	2,299	66
			90	Mall Manjitha ..	578	680	803	771	685	685	1,836	37	344	..	795	42
			91	Kotla Agar ..	349	450	500	525	396	471	1,984	..	163	..	1,325	98
			92	Chandia ..	592	300	175	175	304	263	3,054	...	637	475	1,706	8
				Carried over ...												

IV—*continued.*

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				*Assessment per acre on*			*Add to column 11 grazing and date assessment*			
Cultivated										REMARKS.
Irrigated	Unirrigated	Total	Total Malguzari land	Total area	Total Malguzari lands	Total land under cultivation	Grazing land jama	Date jama	Grand Total	
..	413	413	4,011	0 0 10	0 0 1 7	0 15 0	180	...	567 0 0	
270	868	1,138	4,918	0 3 8	0 3 10	1 0 10	189	6 0 0	1,394 0 0	
14	819	833	7,576	0 1 0	0 1 8	0 15 4	253	...	1,052 0 0	
87	373	460	3,773	0 1 6	0 1 11	1 0 1	166	...	628 0 0	Land bad and high. Only gets sailab when the Indus is at its highest. Proprietors very poor.
91	906	997	3,917	0 2 7	0 4 1	1 0 1	200	...	1,201 0 0	
315	355	670	5,939	0 1 2	0 2 3	1 3 9	300	46 0 0	1,172 0 0	At the junction of the Indus with the Chenab. Soil better than the average. Crops very good.
78	219	297	1,465	0 1 3	0 2 11	0 14 7	58	...	330 0 0	Soil inferior and majority of the people poor.
38	91	129	1,760	0 0 11	0 1 3	1 1 3	160	..	299 0 0	
..	630	630	4,239	0 2 2	0 2 3	0 15 0	200	...	791 0 0	
...	998	998	2,903	0 4 1	0 5 2	0 15 0	150	...	1,086 0 0	
84	391	475	4,282	0 1 1	0 1 10	0 1 0	160	9 0 0	649 0 0	
5,512	17,398	22,910	1,20,862	0 2 1	0 3 2	1 0 9	4,968	127 0 0	22,095 0 0	
496	456	952	3,791	0 3 11	0 5 10	1 1 11	128	110 0 0	1,367 0 0	
875	479	1,354	2,463	0 7 1	0 10 7	1 3 4	100	6 0 0	1,739 0 0	Soil above the average and protected from floods in its richest part. Proprietors fairly well off.
219	324	543	2,292	0 3 10	0 4 1	1 1 1	79	35 2 0	698 2 0	
365	583	1,148	5,953	0 3 5	0 4 2	1 5 7	216	43 0 0	1,807 0 0	The village required relief. I did not go as low as revenue rates only because the village had been paying higher.
505	312	817	4,137	0 3 8	0 3 9	1 3 3	149	12 0 0	1,145 0 0	
342	822	1,164	6,813	0 2 8	0 2 10	1 0 8	200	1 0 0	1,413 0 0	
282	902	1,184	3,566	0 4 8	0 4 11	0 15 5	110	1 0 0	1,203 0 0	
920	390	1,310	2,803	0 3 4	0 10 4	1 2 1	45	3 0 0	1,530 0 0	
494	274	868	3,651	0 3 4	0 5 1	1 5 3	175	415 0 0	1,755 0 0	Better than its neighbours and had paid much higher than the revenue rates jama. For this reason I did not go as low as revenue rates.
692	472	1,164	3,529	0 7 0	0 8 4	1 9 2	160	330 0 0	2,225 0 0	
151	467	618	1,455	0 6 0	0 7 6	1 1 8	38	6 0 0	729 0 0	
94	304	398	1,821	0 3 10	0 4 2	1 2 11	64	65 0 0	550 0 0	Soil enriched by fertile deposit from the Chenab and had been paying a higher jama than revenue rates.
90	138	228	1,942	0 1 5	0 2 2	1 3 5	40	...	303 0 0	Soil bad. Land high and only gets sailab when the river rises very high Area of wells below the average. Hence I fixed the rate of sailaba and of abiana below revenue rates.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil.	Assessment Circle.	Khalisah, shared or Jagir.	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhdi.			MALGUZARI	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government Rakh	Uncultivated: Culturable waste	Uncultivated: Lately abandoned
				Brought forward												
ALIPUR TAHSIL.	CHAHI SAILABA.	KHALISAH.	93	Amirpur ..	299	276	276	257	275	254	825	...	29	...	497	30
			94	Bhambri ..	1,300	1,119	782	673	570	501	2,936	...	699	72	1,527	168
			95	Missan Kot Bhua	2,081	1,700	1,200	1,307	1,068	1,125	6,269	...	345	690	4,297	27
			96	Khiara ..	330	214	108	108	59	59	1,527	...	165	1,010	269	16
			97	Kotli Lal ..	264	200	185	165	118	118	1,767	..	370	593	664	12
			98	Khanwah ..	794	700	500	500	516	498	4,979	..	698	1,676	2,148	43
			99	Fatehpur ..	2,041	1,406	906	906	1,753	1,752	11,299	..	425	1,977	6,969	218
			100	Muhib Shah ..	1,102	537	309	309	337	349	3,994	...	1,481	927	1,282	35
			101	Bakir Shah Janubi	1,275	1,057	662	662	532	496	3,557	...	1,263	893	889	69
			102	Nusratpur ..	206	230	185	185	155	155	2,048	...	336	474	1,052	9
			103	Kundai ..	1,515	1,515	954	954	804	845	3,703	...	970	...	2,050	38
			104	Basti Haji ..	819	519	398	398	249	249	2,666	...	271	...	2,132	15
			105	Massan ..	179	169	185	185	110	110	687	...	270	...	332	5
			106	Kotla Ghulam Shah	664	697	697	713	702	724	1,905	...	73	...	1,165	48
			107	Ghauspur ..	170	300	451	256	196	196	801	..	14	...	488	148
			108	Nihalwala ..	220	220	160	160	125	125	224	...	15	..	101	2
			109	Daulatpur ..	421	400	284	235	227	213	1,472	...	57	...	1,163	29
			110	Kuhar Piran ..	332	300	300	260	236	234	2,121	..	396	574	884	6
			111	Kuhar Fakiran ..	226	150	80	70	73	74	234	...	101	...	62	...
			112	Kotla Afghan ..	886	652	360	360	418	418	1,017	...	272	...	368	27
			113	Nabipur ...	1,212	700	655	535	282	256	1,904	...	114	...	1,520	67
			114	Pakka Naich ...	455	800	726	589	693	610	2,411	..	92	...	1,492	388
			115	Theri ...	1,450	1,961	2,759	1,993	1,268	1,286	3,678	...	862	...	1,480	300
			116	Gabar Arain ...	1,698	2,272	2,661	2,243	1,413	1,653	2,835	...	563	...	978	144
			117	Thattia Jhandiran	1,595	1,377	1,354	1,354	977	1,144	3,082	...	447	...	1,607	157
			118	Chak Rao ...	246	267	266	266	111	150	515	...	73	...	327	16
			119	Khairpur Sadat ...	3,682	2,685	2,125	2,123	1,273	1,339	4,630	...	191	...	3,115	143
			120	Sundar ...	604	815	722	705	654	688	1,117	...	37	...	428	106
			121	Shah Wassaya ...	418	490	514	514	787	787	1,561	...	24	...	709	111
			122	Malik Araia ...	448	1,202	764	794	784	910	1,917	...	132	...	963	166
			123	Ghiri ..	1,556	2,100	1,605	1,338	1,143	1,143	5,300	..	122	1,222	2,828	142
			124	Sheikhani ..	961	700	600	708	853	853	3,039	37	74	...	2,142	140
			125	Yarewali ..	991	609	413	413	405	429	1,048	...	56	...	558	53
			126	Chak Daudwah ..	45	36	33	33	40	39	769	...	10	...	725	9
			127	Alipur ..	742	900	906	905	874	820	2,782	...	77	721	1,846	70
			128	Bakir Shah Shomali	275	850	660	660	562	467	2,134	...	76	...	1,404	267
				Total ..	53,007	48,826	43,337	40,861	34,579	35,147	1,45,364	104	16,835	14,024	80,392	4,791

IV—*continued.*

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				*Assessment per acre on*			*Add to column* 11 *Grazing and date assessment*			
Cultivated										
Irrigated	Unirrigated	Total	Total Malguzari land	Total area	Total Malguzari land	Total land under cultivation	Grazing land jama	Date jama	Grand Total	REMARKS.
84	185	269	796	0 4 11	0 5 1	0 15 1	29	...	283 0 0	Both sailab and canal uncertain.
231	239	470	2,165	0 2 8	0 3 8	1 1 1	35	3 0 0	539 0 0	A village of bad land and poor proprietors near the tail of the Khanwah Canal which brings a supply almost as fickle and uncontrollable as sailab.
419	492	910	5,234	0 2 10	0 3 5	1 3 9	195	42 0 0	1,362 0 0	
54	13	67	352	0 0 7	0 2 8	0 14 1	13	...	72 0 0	
101	25	126	802	0 1 1	0 2 1	0 15 0	30	...	148 0 0	
360	54	414	2,605	0 1 7	0 3 1	1 3 3	33	1 0 0	532 0 0	
270	1,440	1,710	8,897	0 2 6	0 3 1	1 0 4	323	4 0 0	2,079 0 0	
115	154	269	1,586	0 1 5	0 3 6	1 4 9	59	1 0 0	409 0 0	Area of the wells small.
280	163	443	1,401	0 2 3	0 5 8	1 1 11	43	...	539 0 0	
158	19	177	1,238	0 1 3	0 2 0	0 14 0	48	...	203 0 0	
330	315	645	2,733	0 3 8	0 4 11	1 4 11	94	18 0 0	957 0 0	
209	39	248	2,395	0 1 6	0 1 5	1 0 1	97	1 0 0	347 0 0	
80	..	80	417	0 2 7	0 4 6	1 1 0	15	...	125 0 0	
285	334	619	1,832	0 6 1	0 6 4	1 2 9	55	15 0 0	794 0 0	
127	24	151	787	0 3 11	0 3 11	1 4 9	15	1 0 0	212 0 0	
89	17	106	209	0 3 11	0 9 7	1 2 10	5	...	130 0 0	
72	151	223	1,415	0 2 4	0 2 5	0 15 3	36	...	249 0 0	
38	22	261	1,151	0 1 9	0 3 3	0 14 4	60	...	294 0 0	
32	39	71	133	0 5 1	0 8 11	1 0 8	...	...	74 0 0	
133	217	350	745	0 6 7	0 8 11	1 3 2	18	20 0 0	456 0 0	
105	98	203	1,790	0 2 2	0 2 4	1 4 3	36	37 0 0	329 0 0	Area of wells small and abiana fixed low in consequence.
315	64	439	2,319	0 4 1	0 4 2	1 6 3	42	4 0 0	686 0 0	Canal irrigation partly failed since measurements in consequence of the closing of the Nangwah, sailab irregular and people very poor, hence rates are fixed low.
690	346	1,036	2,816	0 5 7	0 7 3	1 3 10	80	14 0 0	1,380 0 0	
862	288	1,150	2,272	0 9 4	0 11 7	1 6 11	75	31 0 0	1,759 0 0	Decidedly better than the neighbouring villages, protected from flood, Former jama high. Village required relief, but it was not necessary to go as low as revenue rates jama.
463	408	871	2,635	0 5 11	0 6 11	1 5 0	79	2 0 0	1,225 0 0	On the tail of a canal. On the whole better than other villages of this circle. Relief required. Former jama high but it was not necessary to go as low as revenue rates.
45	54	99	442	0 4 8	0 5 5	1 3 3	15	..	165 0 0	Do. Do.
228	953	1,181	4,439	0 4 8	0 4 9	1 3 2	213	61 0 0	1,613 0 0	I did not go as low as revenue rates because the former jama was high and the rates fixed gave the relief that was required.
282	264	546	1,080	0 9 10	0 10 2	1 4 2	48	35 0 0	771 0 0	
178	539	717	1,537	0 8 1	0 8 2	1 1 7	74	7 0 0	868 0 0	
208	468	676	1,785	0 7 7	0 8 2	1 5 5	80	97 0 0	1,087 0 0	Soil superior and gets sailab from the Chenab so I fixed the sailab rate of the Bet Chenab Circle.
351	635	986	3,956	0 3 5	0 4 7	1 2 6	134	126 0 0	1,403 0 0	
324	322	646	2,928	0 4 5	0 4 8	1 5 2	175	430 0 0	1,458 0 0	
80	301	381	992	0 6 6	0 6 11	1 2 0	18	7 0 0	454 0 0	
25	..	25	759	0 0 10	0 0 10	1 8 11	25	..	64 0 0	
536	32	568	1,984	0 4 9	0 6 7	1 7 1	64	69 0 0	953 0 0	Village is in two chaks; soil of western chak very inferior.
353	34	387	2,058	0 3 6	0 3 7	1 3 4	60	40 0 0	567 0 0	Soil inferior. Rapar and people generally poor.
,276	14,942	29,218	1,14,401	0 3 10	0 4 11	1 3 3	3,925	2,593 2 0	41,665 2 0	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil.	Assessment Circle	Khalisah, shared or Jagir	Serial Number	Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhái			Malguzari	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government Rakh	Uncultivated Culturable Waste	Lately abandoned
ALIPUR TAHSIL.			129	Chak Kach Pak ...	65	65	63	63	180	120	436	...	18	...	286	16
	CHAH NAHRI.		130	Ber Band ...	1,476	1,461	1,893	1,903	2,927	2,474	5,705	14	254	...	1,921	1,420
		KHALISAH.	131	Bilawala ...	614	908	711	726	1,382	1,113	4,671	5	305	788	2,313	321
			132	Kalru Chit ...	228	335	223	223	341	290	634	...	35	...	312	49
			133	Chak Kalru Chit ...	185	328	217	217	335	300	608	...	50	...	246	76
			134	Kotla Sultan Shah ...	487	503	360	360	1,053	645	2,673	...	56	...	1,161	719
			135	Rukanwali ...	171	531	425	425	819	531	1,853	...	93	...	973	69
			136	Kallarwali ...	773	1,260	850	850	2,680	1,700	5,331	...	212	...	2,772	454
			137	Sheikh Ali ...	253	314	261	261	362	362	839	...	32	...	492	77
			138	Makwal ...	557	780	780	780	1,246	975	2,663	28	132	...	1,105	355
			139	Shahr Sultan ...	2,077	2,532	2,345	2,246	3,402	3,135	8,008	...	697	...	3,639	1,164
			140	Kotla Gamún ...	852	732	832	832	1,727	1,248	3,973	9	592	...	880	1,586
				Carried over ...												

IV—*continued.*

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR.				*Assessment per acre on*			*Add to column 11 Grazing and date assessment*			
Cultivated										
Irrigated	Unirrigated	Total	Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing lands Jama	Date Jama	Grand total	REMARKS.
116	...	116	418	0 4 5	0 4 7	1 0 7	24	...	144 0 0	Canal supply irregular. People in middling circumstances and could not bear a greater increase than that proposed which is a fraction less than 100 per cent.
1,996	...	1,996	5,437	0 6 11	0 7 3	1 3 10	180	2 7 0	2,656 7 0	I did not consider it safe to enhance the jama more than I ha e proposed. At measurements the cultivation had fallen off and though it had since improved, there is no guarantee for the prosperity of the village continuing until canals are on a better footing.
896	93	989	3,623	0 3 10	0 4 11	1 2 0	105	42 0 0	1,260 0 0	The village had just suffered from a flood. Some proprietors poor. I did not think it safe to enhance more than the proposed jama which is an increase of 53 per cent on the old jama.
239	...	39	899	0 7 3	0 7 9	1 3 4	20	...	310 0 0	Similar to No. 130. People poor. The proposed increase is as high as is safe.
236	...	236	558	0 7 10	0 8 7	1 4 4	26	...	326 0 0	The village had suffered from insufficient canal supply up to 1874 and had since improved, but there was no guarantee that its prosperity which depended on canal supply would continue. I assessed as high as I considered safe.
737	...	737	2,617	0 3 10	0 3 11	0 14 0	50	...	695 0 0	The proposed jama is nearly double the former jama and as high as was safe though the village is decidedly prosperous.
386	332	718	1,760	0 4 7	0 4 10	0 11 10	30	...	561 0 0	A poor village. The Indus finds its way through the Dhands and does a great deal of damage. Inferior crops grown. People poor and land bad. It was impossible to assess higher.
1,599	264	1,863	5,119	0 5 1	0 5 4	0 14 8	200	...	1,900 0 0	Though this village has improved much, it could not bear more than double its present jama.
244	...	244	807	0 6 11	0 7 2	1 7 9	13	20 0 0	895 0 0	
865	...	865	2,503	0 5 10	0 6 3	1 2 0	40	2 0 0	1,017 0 0	Soil inferior Draman. The majority of the people are poor and in debt. Village suffered from a flood in 1878.
2,483	25	2,508	7,311	0 6 3	0 6 10	1 4 0	192	329 0 0	3,656 0 0	Village is on the tail of a canal and until lately got an insufficient supply of canal water. There is no guarantee that the present prosperity will last. Under the circumstances I could not assess higher.
1,232	...	1,232	3,572	0 5 0	0 5 11	1 0 2	130	3 7 0	1,381 7 0	Had suffered much from deficient canal supply and there is no certainty that the supply will remain good. It was not safe to assess higher. The proposed jama is a fraction under Rs. 50 per cent. higher than last jama.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil	Assessment Circle	Khalisah shared or Jagir	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhái			MALGUZARI	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government Rakh	Uncultivated: Culturable waste	Uncultivated: Lately abandoned
				Brought forward												
ALIPUR TAHSIL.	CHAHI NAHRI.	KHALISAH.	141	Chak Kotla Gamûn	143 0 0	126	135	153	221	200	914	..	142	..	369	238
			142	Damarwala Shomali	1,252 0 0	1,786	1,463	1,463	2,681	2,135	5,844	..	556	..	2,808	682
			143	Bet Khanwala ..	569 0 0	864	752	752	900	752	2,414	..	210	..	1,290	319
			144	Kadirpur ..	1,737 4 0	2,551	1,938	1,938	2,500	2,077	6,603	..	445	..	3,254	1,155
			145	Kotla Lal Shah ..	..	1,592	1,300	1,300	1,767	1,767	3,835	..	497	..	1,328	315
			146	Bambú sandila ..	460 0 0	600	600	600	1,062	818	1,394	..	99	..	389	192
			147	Mela Chhacha ..	106 0 0	146	100	100	193	100	1,015	..	149	490	99	133
			148	Bet Hasari ..	295 0 0	529	425	425	667	560	2,557	..	205	..	1,745	112
			149	Dinga Kurai ..	504 0 0	750	650	650	978	650	2,461	..	196	..	897	648
			150	Jangle ..	1,188 0 0	2,651	1,914	1,914	1,501	1,700	1,824	..	80	..	140	64
			151	Tahú ..	1,899 0 0	1,822	1,883	1,883	1,355	1,560	1,716	..	120	..	50	46
			152	Kotla Raham Shah	2,147 0 0	2,406	2,184	2,184	1,098	1,800	2,167	..	155	..	723	97
			153	Khalti ..	687 0 0	726	677	677	885	800	2,025	..	154	..	987	302
			154	Rao ..	2,949 0 0	2,174	2,146	2,146	1,803	1,900	1,596	..	119	..	454	93
				Carried over ..												

IV.—*continued.*

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				*Assessment per acre on*			*Add to column 11 Grazing and date assessment.*			
Cultivated.										
Irrigated	Unirrigated	Total	Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing lands jáma	Date jáma	Grand Total	REMARKS.
165	..	165	772	0 3 6	0 4 2	1 3 5	24	..	224 0 0	I could not go as high as revenue rates because (1) the increase would have been too large and sudden, (2) the canal supply though improved is still precarious.
1,784	14	1,798	5,283	0 5 1	0 6 6	1 3 0	140	..	2,275 0 0	The soil is Draman and poor. The majority of owners are badly off. Though the village has improved it could not bear a greater increase.
595	..	595	2,204	0 5 0	0 5 6	1 4 3	64	13 0 0	829 0 0	Village injured by a flood. Part of the village high and does not get properly irrigated, while the low-lying lands get flooded. Majority of proprietors poor. No increase possible.
1,749	..	1,749	6,158	0 5 0	0 5 5	1 3 0	176	3 0 0	2,256 0 0	The soil is similar to that of 142 but slightly better. West of the village injured by a flood and could not bear an increase up to revenue rates.
598	1,057	1,655	3,338	0 7 4	0 8 6	1 1 1	100	..	1,867 0 0	
705	18	723	1,295	0 9 5	0 10 1	1 2 1	46	3 0 0	867 0 0	Village reduced from deficient canal supply which has improved during last two years. Proprietors poor and in debt. A flood did damage in 1878. The village can bear no more than the increase proposed.
128	16	144	376	0 1 7	0 4 3	0 11 1	5	2 0 0	107 0 0	This village was so reduced that it was impossible to raise the jáma to revenue rates. It had suffered from a flood. Lands badly cultivated. Tenants not to be had. Majority of owners poor.
380	108	488	2,352	0 3 2	0 3 4	1 0 5	75	..	575 0 0	An inferior village. Its high lands get insufficient canal supply, its low lands get flooded. Some proprietors have absconded. Soil inferior Draman.
720	..	720	2,265	0 4 2	0 4 7	0 14 5	62	1 0 0	713 0 0	Soil sandy and poor. People badly off and in debt. Crops inferior. Though the present jáma is low, it cannot be increased.
1,040	..	1,040	1,244	0 4 8	0 5 10	1 10 2	8	10 0 0	1,718 0 0	Though the village requires relief it is not necessary to go so low as revenue rates for the village is decidedly above the average and has been paying a higher jáma.
900	..	900	996	1 5 6	1 8 0	1 10 8	4	4 0 0	1,508 0 0	Very similar to the last. A superior village in bad circumstances.
1,192	..	1,192	2,012	0 13 3	0 14 4	1 8 2	33	30 0 0	1,863 0 0	Very similar to the two last villages. The relief given is ample.
651	31	682	1,871	0 6 4	0 6 10	1 2 9	60	7 0 0	867 0 0	Canal supply deficient. Village much injured by the bursting of the Kot Ratta Band. Soil rapar. jáma could not have been increased up to revenue rates.
930	..	930	1,477	1 3 1	1 4 7	2 8 0	22	15 0 0	1,937 0 0	A superior village growing sugar-cane largely, close to the town of Jatoi. Slight relief required but it is not necessary to go as low as revenue rates.

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil	Assessment Circle	Khalisah shared or Jagir	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhái.			Malguzari	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government Rakh	Uncultivated: Culturable waste	Uncultivated: Lately abandoned
				Brought forward												
ALIPUR TAHSIL.			155	Kesar Ghaziani ..	1,693	897	1,097	1,097	855	980	933	..	110	..	169	63
			156	Daulat Wahi ...	1,425	1,224	1,234	1,234	1,096	1,134	1,254	.	46	..	317	67
			157	Vidad ...	2,012	1,809	1,874	1,874	1,753	1,874	1,943	..	118	..	542	133
			158	Sabacwala ...	3,190	2,041	2,436	2,436	1,807	2,175	2,311	1	396	..	636	43
			159	Jahanpur ...	3,456	3,200	3,091	3,091	2,746	3,091	1,847	..	186	..	82	10
			160	Shahbazpur ..	1,131	1,521	1,588	1,588	1,894	1,750	5,145	..	692	..	2,078	994
			161	Vains ..	315	790	804	804	844	804	4,173	..	1,454	548	864	658
			162	Basti Arif ..	683	1,077	1,013	1,013	1,665	1,194	6,387	..	202	1,068	3,528	372
			163	Jhalarin ..	747	1,431	1,441	1,441	2,031	1,630	5,773	..	872	..	2,746	665
			164	Phullan ..	1,823	2,000	2,016	2,016	1,470	1,670	1,919	...	108	...	468	341
			165	Hamzewali ..	173	280	168	168	244	168	7,334	..	13	6,441	636	84
				Carried over ..												

ALIPUR TAHSIL. — OHARI NAHAL. — KHALISAH.

IV—*continued.*

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				*Assessment per acre on*			*Add to column 11 Grazing and date assessment.*			
Cultivated.										REMARKS.
Irrigated	Unirrigated	Total	Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing land jama	Date jama	Grand Total	
523	68	591	823	1 9 0	1 8 1	1 10 6	18	20 0 0	1,018 0 0	Lies just south of the town of Jatoi. Slight relief required but not necessary to go as low as revenue rates.
652	172	824	1,208	0 14 6	0 15 0	1 6 0	30	2 0 0	1,166 0 0	Close to the last village to which it is slightly inferior.
1,143	..	1,143	1,825	0 15 5	1 0 5	1 10 3	27	9 10 0	1,910 10 0	A superior village close to Jatoi. Present jama maintained though above revenue rates.
1,198	37	1,235	1,914	0 15 1	1 2 2	1 12 2	51	33 0 0	2,259 0 0	Like all the villages about Jatoi. Labaewala requires some relief but there is no need to go as low as the revenue rate jama, because the village is superior, favorably situated and has improved since in measurements.
1,569	..	1,569	1,661	1 10 10	1 13 9	1 15 7	20	157 0 0	3,268 0 0	This is the best village in the Alipur Tahsil in every respect.
1,381	..	1,381	4,453	0 5 5	0 6 3	1 4 3	100	6 0 0	1,856 0 0	Soil poor and requires long rest after a crop. No greater increase possible.
647	2	649	2,171	0 3 1	0 5 11	1 3 10	40	1 0 0	845 0 0	Like Shahbaspur in its soil but the canal supply is bad and people are poor and in debt. No increase possible.
1,145	22	1,167	5,067	0 3 0	0 3 10	1 0 4	70	2 0 0	1,266 0 0	Very like the two last villages in every respect though highly assessed; it will not bear an increase up to revenue rates.
1,486	4	1,490	4,901	0 4 6	0 5 4	1 1 6	100	9 0 0	1,739 0 0	Similar to the last three villages which are situated in the sand of land in the centre of the Doab. Increase up to revenue rates is not possible.
1,002	..	1,002	1,811	0 13 11	0 14 9	1 10 8	32	61 0 0	1,763 0 0	A superior village adjoining Jahanpur No. 159 and similar to it. It has suffered from bad canal supply and relief is necessary but there is no need to go as low as revenue rates.
160	..	160	880	0 0 4	0 3 1	1 0 9	20	3 0 0	191 0 0	Exactly like 160 to 163. High, sandy, poor soil, canal supply deficient. People mostly poor.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil.	Assessment Circle.	Khalisah shared or Jagir.	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhái			Malguzari	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government Rakh	Uncultivated	
															Culturable waste	Lately abandoned
ALIPUR TAHSIL.	CHAHI NAHRI.	KHALISAH.		Brought forward												
			166	Yaki Wali ...	1,470	1,451	1,174	1,174	1 287	1,287	3,446	...	201	...	1,895	446
			167	Piru Wali ...	1,823	2,329	1,941	1,941	1,768	1,941	2,636	...	836	...	403	196
			168	Makwal Hader ...	1,557	2,220	1,932	1,930	2,392	2,322	2,507	...	165	...	349	360
			169	Mutafarka ...	882	1,300	1,099	1,099	1,470	1,200	2,789	...	155	...	1,495	228
			170	Banda Shah ...	1,038	1,032	1,042	1,048	1,187	1,187	1,081	...	92	...	154	116
			171	Ali Wali ...	2,863	3,158	3,064	3,064	2,444	2,650	7,562	...	1,995	2,220	1,498	256
			172	Jag Mal ...	540	951	1,006	1,006	795	900	2,271	...	38	413	1,203	19
			173	Ghahoan ...	4,920	5,500	5,040	5,063	4,3 94	5,063	9,105	5	1,086	...	4,238	894
			174	Bet Nabi Shah ...	2,120	2,250	1,402	1,402	1,204	1,464	1,445	...	106	...	172	386
			175	Tibbi Arain ...	1,653	1,653	1,520	1,520	1,557	1,600	1,745	...	154	...	419	156
			176	Khanpur Bhani ...	623	851	831	831	1,113	981	2,185	...	471	...	482	447
				Total ...	57,606-4-0	67,439	61,940	61,893	69,541	66,657	1,48,400	62	16,099	11,918	55,005	17,518
				Grand Total ...	1,73,371-3-9	1,67,807-15-0	1,49,741-15-0	1,49,601-11-2	1,53,174	1,50,385	5,67,875	166	84,919	56,086	2,73,818	81,574

IV.—*continued.*

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				*Assessment per acre on*			*Add to column 11 Grazing and date assessment*			
Cultivated										
Irrigated	Unirrigated	Total.	Total Malgusari lands	Total area	Total Malgusari lands	Total land under cultivation	Grazing lands jáma	Date jamá	Grand Total	REMARKS.
904	...	904	3,245	0 6 0	0 6 4	1 6 9	94	16 0 0	1,397 0 0	
1,201	...	1,201	1,800	0 11 9	1 1 3	1 9 10	24	56 0 0	2,021 0 0	A superior village. No change required though the jáma is above revenue rates.
1,633	...	1,633	2,342	0 14 10	0 15 10	1 6 9	28	28 0 0	2,378 0 0	Similar to Yaki Wali No. 166.
911	...	911	2,634	0 6 11	0 7 3	1 5 1	69	167 0 0	1,436 0 0	Except the well close to the village the soil is rapar and kalar of inferior description. Cultivation and number of wells decreased.
719	...	719	989	1 1 7	1 3 4	1 10 5	11	52 0 0	1,250 0 0	
1,587	6	1,593	3,347	0 5 7	0 12 8	1 10 7	140	22 0 0	2,812 0 0	A village above the average but requiring relief. Still there is no need to go as low as revenue rates.
597	1	598	1,820	0 6 4	0 7 11	1 8 1	60	5 0 0	965 0 0	Similar to Ali Wali No. 171.
2,874	8	2,882	8,014	0 8 11	0 10 1	1 12 1	205	177 0 0	5,445 0 0	Much above the average and very favorably situated as regards markets.
781	...	781	1,339	1 0 2	1 1 6	1 14 0	44	12 0 0	1,520 0 0	Has improved very much since measurements.
1,016	...	1,016	1,591	0 14 8	1 0 1	1 9 2	23	57 0 0	1,680 0 0	Improved since measurements.
825	...	825	1,714	0 7 4	0 9 2	1 3 0	30	2 0 0	1,018 0 0	Has suffered from bad canal supply and has not yet recovered. Soil sandy and poor.
46,520	2,278	48,798	1,21,321	0 7 2	0 8 10	1 5 9	3,065	1,884 8 0	71,106 8 0	
71,652	49,660	1,21,312	4,26,704	0 4 7	0 5 6	1 3 10	14,420	4,334 2 0	1,69,139 2 0	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil	Assessment Circle	Khalisah shared or Jagir	Serial Number	Village.	Highest assessment of			Average demand of last five years.	Estimated demand at the revenue rates of	Proposed assessment.	Total area.	Minhdi.			MALGUZARI	
					1st Settlement.	2nd Settlement.	3rd Settlement.					Lakhiraj.	Banen.	Government rakh.	Uncultivated	
															Culturable waste.	Lately abandoned.
SANAWAN TAHSIL.	BET.	KHALISAH.	1	Chhajrah ...	..	..	478	445	470	506	4,120	..	1,673	...	1,860	9
			2	Nishanwâla	..	..	244	342	358	358	3,248	..	1,300	...	1,493	13
			3	Lunbarwâla ..	260	120	582	612	795	795	6,004	..	1,819	...	3,260	33
			4	Matwaniwâli ..	..	..	486	532	626	674	7,843	..	4,052	..	2,959	61
			5	Sawalwâli ..	..	..	217	360	275	254	5,135	..	2,696	...	2,068	32
			6	Fakirwâli ..	..	...	230	361	146	146	3,690	..	2,112	...	1,389	1
			7	Kaimwâla ..	2,311	1,456	1,489	1,468	2,462	2,297	4,032	..	256	..	1,553	432
			8	Lunwâla ..	2,020	970	1,208	1,234	1,272	1,272	3,411	..	257	..	1,615	224
			9	Jhunjanwâli ..	1,200	...	1,184	1,045	1,175	1,174	4,448	..	1,313	..	1,804	34
			10	Utera	..	..	88	96	102	94	726	..	124	..	476	1
			11	Naharwâla ..	..	..	78	101	88	88	3,300	..	2,794	..	402	1
			12	Kalluwâla ..	..	...	229	699	527	630	1,445	..	646	..	160	..
			13	Saban Machhi ..	..	..	562	461	282	316	3,609	..	881	1,822	564	..
			14	Khar Gharbi ..	..	..	1,800	1,459	1,275	1,233	7,008	..	4,187	..	1,414	65
				Carried over ..												

IV.—*continued.*

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				*Assessment per acre on*			*Add to column* 11 *Grazing and date assessment.*			
cultivated.										
Irrigated	Unirrigated	Total	Total Malguzari lands.	Total area.	Total Malguzari lands.	Total land under Cultivation.	Grazing land Jama.	Date Jama.	Grand Total.	REMARKS.
...	578	578	2,447	0 2 0	0 3 2	0 14 0	84	...	590	An exceedingly good Bet village but much exposed to river action, assesment slightly above revenue rates.
...	440	440	1,948	0 1 9	0 2 11	0 12 0	34	...	392	A Bet village of medium quality. Present rate on sailaba land is Rs. 0-11-11 per acre. I have raised it to annas 13 per acre.
126	764	890	4,185	0 2 1	0 4 0	0 14 4	100	..	895	Exactly the same as preceding.
11	752	763	3,791	0 1 5	0 2 10	0 14 2	110	...	784	A good Bet village but much exposed to the river and the quality of its land varies much in consequence. I have fixed 14 annas as the rate for sailaba lands and Rs. 6 per well and jhalar.
...	339	339	2,439	0 0 9	0 1 8	0 12 0	93	...	347	Land poor and exhausted and unusually full of weeds. The sailaba rate has hither to been Rs 0-9-11 have raised it to 12 annas.
...	180	180	1,578	0 0 8	0 1 6	0 13 0	54	...	200	A good village at present but very much exposed to river action and quality of the soil consequently variable. I have assessed at revenue rates.
614	2,017	2,631	4,676	0 7 5	0 7 9	0 14 0	70	107	2,474	This is one of the villages which has suffered most from the erection of the Sanawan embankment. I have fixed the rate for sailaba land at 12 annas per acre, and abiana Rs. 6 per well and jhalar.
465	850	1,315	3,154	0 6 0	0 6 6	0 15 6	78	12	1,357	The eastern part injured by water driven back from the Sanawan embankment. The western part gets sailaba direct from the river and is good. I have assessed at revenue rates.
312	985	1,297	3,135	0 4 3	0 6 0	0 14 6	81	8	1,263	Village injured by back water from the embankment. I have assessed at revenue rates.
..	125	125	602	0 2 1	0 2 6	0 12 0	11	...	105	Land good but proprietors in reduced circumstances because the village has been infarm. Present sailaba rate Rs. 0-9-11. I have raised to 12 annas.
15	86	101	506	0 0 5	0 2 9	0 13 11	18	...	106	A Bet village of medium quality. I have assessed at revenue rates.
255	390	646	805	0 7 0	0 12 6	0 15 8	...	..	630	A Bet village much exposed to floods and erosion. Present sailaba rate annas 14 is maintained. Abiana Rs. 6 per well and jhalar.
38	304	342	906	0 1 5	0 5 7	0 13 9	28	...	344	A superior Bet village. Sailaba rate fixed at annas 15 per acre. Abiana Rs. 6 per well and Rs. 3 per jhalar. Average area per well 14 acres, average area per jhalar 6 acres only.
573	775	1,348	2,821	0 2 10	0 7 0	0 14 8	64	5	1,302	An inferior Bet village intersected by four branches of the river. People poor and in debt, sailaba rate fixed at Rs. 0-12-6. Abiana per well and jhalar Rs. 6.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil.	Assessment Circle.	Khalisah shared or Jágír	Serial Number.	Village.	*Highest assessment of*			Average demand of last five years.	Estimated demand at the revenue rates of	Proposed assessment.	Total area.	*Minhái.*			MALGUZARI	
					1st Settlement.	2nd Settlement.	3rd Settlement.					Lakhiraj.	Banen.	Government rakh.	*Uncultivated* Unkurable waste.	Lately abandoned.
				Brought forward												
SANAWAN TAHSIL.			15	Bet Angra ..	1,900	1,500	1,441	1,127	1,076	1,079	4,142	..	2,435	..	483	14
			16	Dandewála ...	1,100	814	1,165	1,128	1,387	1,409	4,752	..	246	952	1,943	67
			17	Esanwála ...	...	61	629	587	519	593	14,535	...	1,036	7,876	5,021	8
			18	Sojhalwáli ...	...	...	8	180	202	224	2,247	...	330	...	1,638	52
			19	Kalor ...	...	...	187	187	182	196	2,246	...	1,389	...	631	2
			20	Bet Ramya ...	627	518	541	465	637	920	4,472	...	142	1,378	2,118	96
			21	Dibbi Shah ...	2,175	507	863	792	1,153	1,225	4,040	...	176	..	2,668	43
			22	Bet Zaini ...	924	520	659	652	768	768	1,964	..	41	...	1,168	53
			23	Bet Sohni ...	1,580	372	462	480	1,095	1,238	4,418	...	125	743	2,383	19
			24	Kundarwáli ...	...	...	45	66	49	49	244	...	33	...	159	6
			25	Chanwála ...	1,392	400	919	764	1,325	1,325	4,597	...	218	...	2,939	46
			26	Khawaswála ..	...	...	43	65	28	28	347	...	312	...	...	1
			27	Malanawála ...	584	117	268	284	591	672	2,181	...	60	...	1,464	4
			28	Bet Utera ...	364	114	191	157	334	353	2,804	...	705	..	1,784	15
			29	Gadi Sandila ...	...	...	123	128	143	143	445	...	3	...	263	2
			30	Jubjha ...	...	..	6	6	10	10	17	..	..	...	5	...
			31	Drabi ...	...	...	51	65	86	93	2,105	...	1,799	..	200	...
			32	(Mukwal Khurd) ...	...	...	249	226	229	246	1,910	...	128	...	1,499	3
				Carried over ...												

IV.—*continued.*

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				*Assessment per acre on*			*Add to column* 11 *Grazing and date assessment.*			
Cultivated.										
Irrigated.	Unirrigated.	Total.	Total Malguzari lands.	Total area.	Total Malguzari lands.	Total land under cultivation.	Grazing land Jama.	Date Jama.	Grand Total.	REMARKS.
437	773	1,210	1,707	0 4 2	0 10 1	0-14-3	22	12 8 0	1,113-8-0	Village divided into two parts. One high out of the reach of floods and gets a scanty supply of canal water. The other low and subject to floods. Revenue rates generally followed. Jhalars have large areas in this village, abiana per Jhalar Rs. 7.
601	943	1,544	3,554	0 4 9	0 6 4	0 14 7	87	11 0 0	1,507	A Bet village of medium quality, area of Jhalars and wells above the average, sailaba rate fixed at 13 annas per acre. Abiana per well and Jhalar Rs. 7.
119	475	59	5,623	0 0 8	0 1 8	1 0 0	226	..	819	A superior Bet village. Sailaba rate fixed at 15 annas per acre. Abiana Rs. 6 per well and Jhalar.
96	131	227	1,917	0 1 7	0 1 10	0 15 9	74	...	298	A very good Bet village; 15 annas per acre fixed for sailaba land. Abiana Rs. 6 per well and Jhalar.
...	224	22	857	0 1 5	0 3 8	0 14 0	28	...	224	A good Bet village; 14 annas per acre fixed for sailaba land. No wells or Jhalars at present.
466	272	73	2,952	0 3 3	0 5 0	1 3 11	95	8 0 0	1,028	A very good Bet village. Sailaba rate 15 annas per acre and abiana Rs. 6 per well and Jhalar.
679	474	1,15	3,864	0 4 10	0 5 11	1 1 0	120	8 0 0	1,353	A good Bet village. Area of wells and Jhalars average. 14 annas fixed per acre for sailaba land and abiana Rs. 6 per well and Jhalar.
414	288	70	1,923	0 5 9	0 6 5	1 1 6	66	12 0 0	846	A bad village with poor land; 13 annas fixed as the rate for sailaba land and Rs. 6 for each well and Jhalar as abiana.
770	378	1,14	3,550	0 4 6	0 5 6	1 1 3	134	16 0 0	1,388	A very good village; 15 annas fixed for sailaba land per acre. Abiana per well and Jhalar Rs. 6.
32	14	4	211	0 3 3	0 3 9	1 1 0	2	...	56	A mere sailaba plot. Assessed at revenue rates.
386	1,008	1,39	4,379	0 4 7	0 4 10	0 15 3	40	21 0 0	1,886	A Bet village of medium quality. Assessed at revenue rates.
...	34	34	35	0 1 3	0 12 10	0 13 2	...	...	28	A mere sailaba plot. Assessed at revenue rates.
237	416	65	2,121	0 4 11	0 5 1	1 0 6	65	8 0 0	745	A very good Bet village; 15 annas fixed as the rate for sailaba land per acre, abiana Rs. 6 per well and Jhalar
195	105	300	2,099	0 2 0	0 2 8	1 2 8	85	5 0 0	443	A good Bet village; 14 annas per acre fixed as the rate for sailaba cultivation, abiana Rs. 6 per well and Jhalar.
...	176	176	442	0 5 2	0 5 2	0 13 0	12	..	155	A good Bet village but unusually exposed to river action. Assessed at revenue rates.
..	12	12	17	0 9 6	0 9 6	0 13 4	...	..	10	A mere sailaba plot. Assessed at revenue rates.
...	106	106	306	0 0 9	0 4 11	0 14 0	5	..	98	A good Bet village; 14 annas per acre fixed for the sailaba rate.
18	256	274	1,782	0 2 1	0 2 3	0 14 4	67	...	813	An exceedingly good Bet village but very much exposed to river action. Assessed at 14 annas per acre for sailaba land.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil	Assessment Circle	Khalisah shared or Jagir	Serial No.	Village.	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment.	Total area	Minhái..			MALGUZARI	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government rakh	Uncultivated Culturable waste	Uncultivated Lately abandoned
SANAWAN TAHSIL				Brought forward												
			33	Usman Shah ...	...	...	12	33	57	57	188	..	4	...	114	...
			34	Usmán Rid ..	...	250	326	312	317	316	1,085	..	38	...	696	20
			35	Panúhán ..	...	...	...	...	...	...	294	..	291	...	3	...
			36	Bhutti Maitla ..	...	...	...	...	...	...	1,665	...	708	957	...	...
			37	Kutrah	...	...	...	...	...	...	375	...	375	..	...	...
				Tibba	...	...	2,542	2,580	2,110	2,110	4,916	...	1,037	...	1,534	280
				Hinjrai	...	...	3,141	2,886	2,892	2,892	12,414	...	2,198	...	6,472	702
				Patal	...	...	1,169	1,169	1,358	1,358	3,627	...	154	...	1,867	119
				Dairadinpanah ...	...	...	437	437	266	266	512	...	17	...	193	49
				Parhar Gharbi ...	...	...	2,428	2,303	2,730	2,730	7,145	...	620	...	3,121	428
				Bhubbar ...	...	...	495	495	499	465	992	...	37	...	399	8
				Jannun ...	...	...	2,073	2,068	1,545	1,545	4,610	...	944	...	1,649	418
				Khai Chak 2nd ...	...	...	553	553	474	474	1,165	...	32	...	588	58
				Jhsanpur ...	...	...	433	433	324	324	486	..	7	...	170	14
				Total ...	16,377	7,219	30,221	29,783	32,239	32,945	1,55,859	...	39,744	13,728	64,139	3,316

Name of village.	
Tibba	..
Hinjrai	..
Patal	..

IV.—continued.

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR.				*Assessment per acre on*			*Add to column 11 Grazing and date assessment.*			
Cultivated.										REMARKS.
Irrigated.	Unirrigated	Total	Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing land Jama	Date Jama	Grand Total	
...	70	70	184	0 6 10	0 4 11	0 13 0	...	...	57	A good Bet village but very much exposed to the river, 13 annas fixed per acre for sailaba land.
109	222	331	1,047	0 4 8	0 4 10	0 15 3	31	3	350	A medium Bet village. Assessed at revenue rates.
...	...	...	3	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	...	...	
1,265	800	265	3,879	0 6 10	0 8 8	1 0 4	...	...	2,110	This and the following eight villages which have no numbers attached are those parts of inland villages which lie west of the Sanawan embankment. They have all suffered more or less from the erection of the embankment and remissions averaging Rs. 5,600 a year have had to be granted since the embankment was made.
1,069	1,973	3,042	10,216	0 3 9	0 4 6	0 15 3	...	...	2,992	
279	1,208	1,487	3,473	0 6 0	0 6 2	0 14 7	...	...	1,358	
135	118	253	495	0 3 4	0 3 7	1 0 10	...	...	266	
838	2,138	2,916	6,525	0 6 1	0 6 8	0 14 8	...	...	2,730	
110	438	548	955	0 7 2	0 7 6	0 13 0	...	...	465	
752	847	1,599	3,666	0 5 4	0 6 9	0 15 6	...	...	1,545	
295	192	487	1,133	0 6 6	0 6 8	0 15 7	...	...	474	
188	107	295	479	0 10 8	0 10 10	1 1 7	...	...	324	

The following statement shows the rates fixed for each village:—

Sailaba rate per acre.	Well and Jhalar rate per well and Jhalar	Name of village.	Sailaba rate per acre.	Well and Jhalar rate per well and Jhalar.	Name of village.	Sailaba rate per acre.	Well and jhalar rate per well and jhalar.
0 13 0	6 0 0	Dairadinpanah	0 13 0	6 0 0	Jannun ..	0 13 0	6 0 0
0 13 0	6 0 0	Parhar Gharbi	0 13 0	6 0 0	Khai Chak 2	0 13 0	6 0 0
0 13 0	6 0 0	Bhubbar ...	0 12 0	6 0 0	Thsanpur ...	0 13 0	6 0 0
11,899	22,783	34,682	1,02,387	0 8 5	0 5 2	0 15 2	1,984	236 8 0	35,165 8 0

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil	Assessment Circle	Khalisah shared or Jagir	Serial No.	Village.	Highest assessment of			Average demand of last five years.	Estimated demand at the revenue rates of	Proposed assessment.	Total area	Minhái.			Malguzari	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government rakh	Uncultivated. Culturable waste.	Uncultivated. Lately abandoned.
SANAWAN TAHSIL	PAKKA CHAHI NAHRI	KHALISAH		Tibba ..	11,100	11,100	5,686	5,686	4,332	5,129	26,023	15	4,563	13,768	3,619	477
			39	Hinjrai ..	8,500	8,500	2,353	2,353	2,292	2,353	6,802	..	288	..	4,228	229
			40	Junnun ..	2,600	1,900	195	195	237	237	316	..	32	..	66	21
			41	Khai Chak 1st ..	3,900	3,100	524	524	592	566	1,079	..	23	..	536	88
			42	Do. 2nd ..	..	..	499	499	422	499	499	..	66	..	39	87
			43	Do. 3rd ..	..	..	897	897	1,065	1,000	1,202	..	68	..	266	76
			44	Dairadinpanáh ..	2,800	2,750	2,056	2,056	1,525	1,999	2,390	..	147	..	759	337
			45	Patal Kot Adu ..	3,200	3,200	2,257	2,257	2,959	2,780	15,353	..	416	7,825	4,541	332
			46	Chowdhry ..	3,300	3,400	3,280	3,280	3,232	3,280	4,078	..	249	..	1,233	166
			47	Bhubbar ..	883	883	264	261	298	264	633	..	49	..	314	49
			48	Parihar Gharbi ..	8,000	5,600	1,855	1,855	2,058	2,058	2,130	..	183	..	298	116
			49	Kotlah ..	..	..	578	578	731	731	1,827	..	48	..	1,081	129
			50	Halah ..	1,100	1,100	1,215	1,136	1,422	1,355	3,167	2	275	..	1,586	228
			51	Sadhari ..	600	600	584	584	942	769	1,134	..	68	..	353	23
			52	Radho ..	526	526	709	709	737	709	1,822	..	84	..	652	37
			53	Manán ..	1,500	1,500	1,641	1,641	1,593	1,641	1,562	..	105	..	254	23
				Carried over ...												

IV.—*continued.*

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				*Assessment per acre on*			*Add to column 11 Grazing and date assessment.*			
Cultivated										
Irrigated	Unirrigated	Total	Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing land Jama	Date Jama	Grand Total.	REMARKS.
3,581	..	3,581	7,677	0 3 2	0 10 10	1 6 11	232	50	5,411	This village had suffered much from floods and some wells had been permanently injured by the soma caused by the Sanawan embankment. Hence a reduction was necessary but as the village had been paying a high jama it was not necessary to go so low as the revenue rates jama. The present jama is suitable and has been retained.
1,604	356	1,960	6,514	0 5 6	0 5 9	1 3 3	500	16	2,869	
197	..	197	284	0 12 0	0 13 5	1 3 3	100	35	372	The eastern part of this village was formerly injured by floods but is now protected by the embankment, and can stand increase up to revenue rates.
432	..	432	1,056	0 8 4	0 9 0	1 5 0	12	7	585	Canal supply good. Proprietors well off. Village improved since measurements and protected by the embankment.
307	..	307	433	1 0 0	1 2 5	1 10 0	28	117	644	Ditto. Ditto.
776	16	792	1,184	0 13 4	0 14 1	1 4 3	12	127	1,139	Village could stand an increase. Some wells had been injured by soma which prevented my going as high as revenue rates.
1,147	..	1,147	2,243	0 13 5	0 14 3	1 7 9	43	75	2,117	Canal supply good. Village improved since measurements, protected by embankment. A few wells suffered from soma which required relief.
2,225	14	2,239	7,112	0 2 11	0 6 3	1 3 10	288	234	3,362	The village can bear an increase. It is protected by the embankment and canal supply has improved. I could not go as high as revenue rates because (1) the eastern part of the village is in the Thal and is sandy and poor; (2) the proprietors could not bear a larger increase.
2,354	76	2,430	3,829	0 13 5	0 14 3	1 5 7	28	410	3,718	Former jama badly distributed, the wells getting canal water assessed lower than those not assessed by canal water. No increase possible. A new distribution will remedy inequalities.
222	..	222	584	0 6 8	0 7 6	1 3 0	32	66	362	Land poor and salt. Village injured by floods but now protected by the Band. No increase possible. Present jama maintained.
1,499	40	1,539	1,947	0 15 6	1 0 11	1 5 5	154	244	2,456	Protected by the Band and improving, can bear a slight increase of the present jama up to the revenue rates jama.
548	..	548	1,779	0 6 5	0 6 7	1 5 4	49	22	802	Village improving. Proprietors well-to-do. Village will stand an increase up to revenue rates.
1,076	..	1,076	2,890	0 6 10	0 7 6	1 4 5	80	23	1,458	Village improving and can stand a small increase. Canal irrigation very bad till lately.
691	..	691	1,066	0 10 10	0 11 6	1 1 10	32	44	845	Canal supply bad till lately. People in middling circumstances. Can bear an increase but not as high as revenue rates.
549	..	549	1,238	0 8 7	0 9 2	1 4 8	29	8	746	Former jama unequally distributed being very heavy on wells unassisted by canal water. People poor and in debt. No increase possible. Present jama maintained.
1,181	..	1,181	1,457	1 0 9	1 2 0	1 6 3	22	130	1,793	Present jama slightly higher than revenue rate jama but no need to reduce it. No increase possible. Much land sold and mortgaged and the village injured by floods in 1874 but now protected by the Band.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil	Assessment Circle.	Khalisah shared or Jagir	Serial No.	Village.	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhai			MALGUZARI	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government rakh	Cultivated	
															Culturable waste	Lately abandoned
				Brought forward												
SANAWAN TAHSIL.	PAKKA CHAHI NAHRI.	KHALISAH.	54	Sheikh Umar ..	3,800	3,800	1,972	1,972	1,770	1,972	2,066	..	186	..	268	49
			55	Bet Rug	..	..	333	333	442	392	447	..	21	..	69	3
			56	Ladha Langar ..	1,500	1,500	1,741	1,741	1,677	1,550	1,628	..	213	..	119	56
			57	Kahiri	800	800	682	682	716	630	1,074	8	66	..	342	124
			58	Shadi Khan ..	1,350	1,233	625	625	557	520	800	..	29	..	311	55
			59	Daya Chokha ..	5,250	4,850	5,190	5,190	5,510	5,000	7,777	13	935	..	2,299	293
			60	Thutti Hasan Ali ..	900	790	568	560	538	568	1,139	..	103	..	597	2
			61	Pirzadah	657	582	453	453	472	500	598	..	28	..	183	39
			62	Thutti Hamza ..	2,300	2,300	1,730	1,716	1,843	1,843	2,693	..	152	..	1,081	19
			63	Bet Mahesar ..	425	380	340	340	361	361	743	..	38	..	390	38
			64	Jhandir Dureja Gharbi ..	1,800	1,800	627	627	731	731	1,015	..	39	..	395	46
			65	Dogar Kulasrah ..	1,450	1,450	1,535	1,535	1,535	1,660	3,760	..	369	..	2,131	122
			66	Tibbi Nizam ..	851	851	824	824	739	739	1,310	..	143	..	533	42
			67	Gurmani ..	5,450	4,750	3,256	3,245	3,228	3,256	6,885	..	252	..	3,798	217
			68	Vairar Abrind ..	1,098	998	733	733	535	500	803	2	46	..	274	92
			69	Khar Janubi ..	..	..	398	398	244	290	230	..	16	..	29	5
				Carried over ..												

IV.—*continued.*

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR.				*Assessment per acre on*			*Add to column 11 Grazing and date assessment*			
Cultivated										REMARKS.
Irrigated	Unirrigated	Total	Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing land Jama	Date Jama	Grand Total	
1,148	415	1,563	1,880	0 15 5	1 0 9	1 4 3	6	54	2,032	People well-to-do, land good; present assessment low. People have let land go out of cultivation and neglected to put up Jhalars in order to get a light assessment. Former jama maintained.
331	30	361	426	0 14 0	0 14 9	1 1 5	..	5	397	Former jama very light, but the village had suffered from failure of canal water and could not bear an increase to revenue rates. People poor except the Koreshis
1,240	..	1,240	1,415	0 15 3	1 1 6	1 4 0	10	200	1,760	Has suffered very much from bad canal management. The canal area fell from 1,238 acres at measurements to 371 acres last year. Decrease absolutely necessary.
529	..	529	1,000	0 9 5	0 10 1	1 3 1	16	73	719	Has suffered from bad canal supply which is still deficient. People poor. Wells minutely sub-divided because the people will not go to get a living elsewhere. Decrease necessary.
405	..	405	771	0 10 5	0 10 9	1 4 7	14	35	569	Deficient canal supply. Village suffered from floods. One-third of the cultivated area mortgaged, and people heavily in debt besides. Relief necessary.
4,147	90	4,237	6,829	0 10 3	0 11 9	1 2 11	104	175	5,279	Canal supply deficient till lately but now improved. Village much reduced in consequence. Mortgages and sales numerous and people heavily in debt besides. Some relief necessary. A redistribution of the jama much required.
371	66	437	1,086	0 8 0	0 8 9	1 4 10	27	32	627	
348	..	348	570	0 13 4	0 14 0	1 7 0	8	30	538	Canal irrigation good. A well-to-do village.
1,355	86	1,441	2,541	0 10 11	0 11 7	1 4 6	75	140	2,058	Village can stand an increase up to the revenue rate jama.
268	9	277	705	0 7 10	0 8 2	1 4 10	18	5	384	
541	..	541	976	0 11 6	0 12 0	1 5 7	36	62	829	Cultivation and number of wells increased. Government rakh containing culturable land released. Village can bear increase up to revenue rate jama.
1,138	...	1,138	3,391	0 7 1	0 7 10	1 7 4	96	84	1,840	A good village, cultivated area and wells increased, canal supply deficient till lately. Jama proposed gives Rs. 36 per canal assisted well with an average area of 24 acres. Village can stand the increase proposed.
585	..	585	1,167	0 9 0	0 10 2	1 4 3	24	5	768	Village has suffered from unequal distribution of canal water. Cultivated and fallow area decreased. Mortgages and sales many. Relief necessary.
2,452	166	2,618	6,633	0 7 7	0 7 10	1 2 11	171	89	3,516	Has also suffered from unequal distribution of canal water but improved since settlement survey. Former jama maintained.
389	..	389	755	0 9 11	0 10 7	1 4 7	12	36	548	This village has suffered more than others from unequal distribution of canal water, cultivated and fallow area and number of wells decreased. One-fourth of the cultivated area mortgaged. Relief necessary.
180	..	180	214	1 4 2	1 5 8	1 9 9	..	20	210	Situated like Vairar Abrind on the tail of the Chuan Canal and has similarly suffered by unequal distribution of canal water. This village was the most highly assessed in the Tahsil and was well off until the canal management became so bad. Relief necessary.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil	Assessment Circle	Khalisah, shared or Jagir	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhdi			MALGUZARI	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government rakh	Uncultivated	
															Culturable waste	Lately abandoned
SANAWAN TAHSIL.	PAKKA CHAHI NAHRI.	KHALISAH.		Brought forward ..												
			70	Thatta Gurmani	4,400	4,100	3,290	3,312	3,288	3,503	8,105	..	355	..	4,726	170
			71	Rao Bela Gharbi ..	1,750	1,500	976	976	723	800	1,336	..	77	..	559	46
			72	Ran ..	484	444	282	258	213	282	1,121	..	41	..	753	56
			73	Chokammar ..	152	152	136	136	208	208	889	..	38	..	619	31
			74	Mansa Ram ..	748	746	810	810	854	854	1,284	143	57	..	405	29
			75	Khuhawar ..	2,500	2,660	1,877	1,844	2,194	2,002	4,241	..	187	..	2,257	196
			76	Rid ..	2,300	2,345	2,512	2,512	2,322	2,512	3,394	..	601	..	1,001	83
			77	Khokhar ..	900	900	1,201	1,201	1,557	1,400	4,774	..	172	..	3,259	169
			78	Jangia ..	450	400	250	250	208	220	233	..	25	..	30	26
			79	Rao Bela Sharki ..	..	..	381	381	316	310	742	..	29	..	397	68
			80	Vairar Sipra ..	350	350	810	800	799	700	1,508	..	61	..	801	64
			81	Gujrat ..	1,700	1,550	1,382	1,380	1,657	1,657	4,415	14	183	..	2,506	253
			82	Munsa Ram Sandila	580	582	2,051	2,051	1,870	2,051	2,260	15	115	..	537	168
			83	Haji Shah ..	250	300	249	249	248	220	686	..	58	..	374	46
			84	Zor :	610	610	489	489	462	441	631	..	58	..	173	84
			85	Bhatti ..	660	660	449	449	397	397	656	..	54	..	287	19
				Carried over ..												

IV.—*continued.*

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				*Assessment per acre on*			*Add to column* 11 *Grazing and date assessment.*			
Cultivated										
Irrigated	Unirrigated	Total	Total Malgusari lands	Total area	Total Malgusari lands	Total land under cultivation	Grazing land Jama.	Date jama	Grand Total	REMARKS.
2,284	570	2,854	7,750	0 6 11	0 7 3	1 3 8	350	48	3,901	A very improving village and can bear an increase. It is this village that gets more than its share of canal water and which has impoverished Vairar, Abrind Khar Jamub and Rao Bela Gharbi.
512	142	654	1,259	0 9 7	0 10 2	1 3 7	12	56	868	Has suffered much from unequal distribution of canal water. Cultivated area decreased. Sugar-cane cultivation abandoned and indigo decreased, since canal supply became bad. People very poor. Relief very necessary.
100	171	271	1,080	0 4 0	0 4 3	1 0 8	34	3	319	There is no reason for reducing the present jama, though it is above revenue rates. The Pathan and Kirars proprietors are well off. The Ráns badly off but they are unusually lazy and helpless.
137	64	201	851	0 3 9	0 3 11	1 0 7	35	4	247	Jama raised to revenue rates jama, cannot go higher as canal and sailaba supply is precarious.
650	...	650	1,084	0 10 7	0 12 7	1 5 0	32	88	974	
1,601	..	1,601	4,054	0 7 7	0 7 11	1 4 0	102	80	2,184	Worse than Mansa Rám the last village, but it can stand an increase.
1,709	..	1,709	2,793	0 11 10	0 14 4	1 7 9	45	45	2,602	Village can pay the present jama though it is above revenue rates. Canal supply has improved lately, a redistribution of the jama is badly wanted and will give relief.
1,174	..	1,174	4,602	0 4 8	0 4 11	1 3 0	100	5	1,505	Village can bear an increase but not up to revenue rates for canal supply is deficient and the village has not received the benefit of recent improvements.
152	..	152	208	0 15 1	1 0 11	1 7 2	5	4	229	Allowing a reduction of Rs. 30 on the present jama for one well that has fallen in Rs 22. The remainder gives an average jama of Rs. 44 well which is as high as is possible. Little room for improvement.
248	..	248	713	0 6 8	0 8 1	1 4 0	9	1	320	Canal supply deficient. Land high. Village in bad circumstances revenue collected with difficulty. Cultivated area decreased. Relief necessary.
581	..	581	1,447	0 7 5	0 7 9	1 3 3	36	3	739	Similarly situated to the last. Number of wells in work decreased. People poor and in debt. Relief necessary.
1,180	277	1,457	4,218	0 6 0	0 6 3	1 2 2	141	117	1,915	Former jama very light. Can standan increase up to revenue rates, not higher for much land is mortgaged, and there are long standing fends in the village.
1,411	14	1,425	2,130	0 14 6	0 15 4	1 7 0	52	75	2,178	No reason to reduce. the present jama though it is above revenue rates.
170	38	208	628	0 5 2	0 6 7	1 0 11	17	8	245	Has suffered from destructive floods followed by complete failure of sailab. Cultivation diminished one well almost useless. People very poor. Some relief necessary canal supply deficient Land high and bad cultivation diminished. Some relief necessary.
336	..	336	573	0 11 2	0 12 4	1 5 0	8	6	455	Land high and bad. Canal supply deficient. Cultivation and wells decreased. A bad village.
305	..	305	602	0 9 8	0 10 7	1 4 10	5	5	407	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil	Assessment Circle	Khalsah, shared or Jagir	Serial No.	Village	*Highest assessment of*			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	*Minhàt*			MALGUZARI	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government rakh	*Uncultivated*	
															Culturable waste	Lately abandoned
				Brought forward ...												
SANAWAN TAHSIL.			86	Núa ..	1,260	1,210	1,024	1,024	1,019	1 024	1,407	..	526	..	125	7
	PAKKA CHAHI NAHRI.		87	Nuran Chhajrah ..	100	100	121	121	138	109	321	..	144	..	68	8
			88	Panwár Janúbi ..	..	..	648	648	546	594	1,233	..	89	..	709	34
			89	Douna ..	1,700	1,700	1,559	1,559	1,306	1,416	2,743	..	560	..	1,073	132
			90	Papa ..	400	400	284	284	264	204	413	..	90	..	115	1
			91	Drig ..	800	800	691	692	634	691	5,462	..	509	1,971	2,210	187
			92	Lal Mir ..	1,650	1,355	1,384	1,384	997	1.125	2,025	..	674	..	299	196
		KHALSAH	93	Khera ..	500	300	470	470	411	470	2,077	..	53	..	1,545	96
			94	Patti Jhandir ..	..	..	666	666	644	600	2,325	..	48	..	1,573	127
			95	Patti Khar ..	..	..	261	259	270	261	7,541	..	26	1,177	6,024	81
			96	Patti Naich ..	..	..	775	763	749	500	8,577	..	14	942	6,875	49
			97	Patti Ghulam Ali Chak Gharbi ..	5,687	6,197	2,066	2,062	1,936	1,665	29,327	..	92	5,065	22,037	331
				Carried over ...												

IV--*continued.*

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				*Assessment per acre on*			*Add to column 11 Grazing and date assessment*			
Cultivated										
Irrigated	Unirrigated	Total	Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing land jama	Date jama	Grand Total	REMARKS.
749	..	749	881	0 11 7	1 2 8	1 5 10	6	6	1,036	Present jama which is almost the same as the revenue rate jama maintained. No increase possible in consequence of bad canal supply.
101	..	101	177	0 5 5	0 9 11	1 1 4	3	1	113	Cultivated area decreased. Number of wells decreased. Canal supply deficient.
401	..	401	1,144	0 7 9	0 8 4	1 7 8	32	17	643	Canal supply deficient and cultivation decreased. Some relief necessary.
978	..	978	2,183	0 8 8	0 10 4	1 7 2	48	36	1,500	Canal supply bad. Cultivation decreased. Soil rapar and kalar, relief necessary but we need not go as low as the revenue rates jama.
199	..	199	323	0 7 11	0 10 1	1 0 5	5	7	216	Bad canal supply. Cultivation diminished. Soil rapar and salt, and the greater part in the Thal. Mortgages many and people very poor.
585	..	585	2,982	0 2 0	0 3 6	1 3 0	55	5	751	Village almost ruinedby failure of the Rajawah canal and the jama had to be reduced in 1875-76 from 894 to 691. I would maintain this though it is above revenue rates. The village had decidedly improved when I saw it last.
856	..	856	1,351	0 8 11	0 13 4	1 5 0	30	34	1,189	Village injured by insufficient canal supply and by a destructive flood in 1874. Mortgages many, wells minutely sub-divided. Cultivated area decreased and 3 well out of work since measurements. Relief necessary, but we need not go as low as the revenue rate jama because part of the village is really in the Pakka Chahi Nahri Circle.
369	16	385	2,024	0 3 7	0 3 9	1 3 6	40	9	519	No reason to reduce the jama though it is above revenue rates. Former jama badly distributed. A new distribution will give all the relief required.
577	..	577	2,277	0 4 7	0 4 3	1 0 8	39	3	642	On the tail of the Sirdar canal; supply always bad and now not improved; cultivated area and number of wells decreased. Soil sandy and poor, relief needed.
233	..	233	6,338	0 0 7	0 0 8	1 1 11	30	..	291	On the tails of the Sardar and Khudadad. Supply always bad and now not improved. No increase possible. I would maintain the present jama which is more than half assets jama but less than revenue rates jama.
697	..	697	7,621	0 1 0	0 1 1	0 11 6	107	3	610	This village is on the tails of the Sardar and Khanpuri canals, and has suffered more than any other from deficient canal supply. Ten wells have become waste since the summary settlement. The village urgently requires relief. It was almost abandoned when I visited it in the cold weather of 1877-78.
1,812	..	1,812	24,170	0 0 11	0 1 1	0 14 8	271	4	1,940	Almost the same as the preceding, village has been ruined by bad canal management, 8 wells have stopped working since measurements. Indigo cultivation almost abandoned, Relief urgently required.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil.	Assessment Circle	Khalisah, shareal or Jagir	Serial No.	Village	Highest assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhái			Malguzari	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government rakh	Uncultivated	
															Culturable waste	Lately abandoned
				Brought forward												
SANAWAN TAHSIL.	THAL CHAHI NAHRI	KHALISAH.	98	Sanawan ..	2,200	2,200	2,009	2,009	1,641	1,900	2,807	..	423	..	798	134
			99	Jhandir Durega Sharki ..	..	..	1,680	1,680	1,343	1,453	2,719	13	1,000	..	505	3
			100	Khar Sharki ..	..	..	643	643	495	592	1,393	..	450	..	447	53
			101	Bhuryog	900	630	876	876	817	934	2,672	...	377	..	1,465	9
			102	Futtu Mal	500	500	229	229	213	200	981	...	162	..	570	
			103	Hans	200	200	217	212	382	317	1,156	..	190	...	601	
			104	Panwar Shamali....	3,000	3,195	1,873	1,869	1,859	1,873	3,941	...	325	..	1,897	
			105	Budh	1,870	1,800	1,601	1,594	1,099	1,239	3,306	...	707	...	1,453	
				Total	17,007	17,357	15,446	15,413	13,490	13,320	76,309	13	5,050	9,155	48,12	

IV.—*continued.*

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				*Assessment per acre on*			*Add to column* 11 *Grazing and date assessment*			
Cultivated										REMARKS
Irrigated	Unirrigated	Total	Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing land jama	Date jama	Grand Total	
1,457	..	1,457	2,384	0 10 7	0 12 9	1 4 10	40	46	1,986	Canal supply (the Sardar) as bad as ever. People in debt, cultivated area decreased. Relief is necessary, though there is no need to go as low as revenue rates, because the village is partly within and partly without the Thal.
1,174	..	1,174	1,706	0 8 7	0 8 7	1 3 10	52	7	1,512	Exactly similar to Sanawan except that it is nearer the tails of the canals and therefore worse off. A number of indigo vats out of work from failure of canal water.
438	..	438	943	0 7 4	0 10 0	1 5 7	22	3	617	Irrigated by a branch of the Sardar. Supply insufficient. Cultivation and number of wells decreased. Village in a depressed condition. Reduction necessary but we need not go so low as the revenue rates jama.
746	..	746	2,295	0 5 7	0 6 6	1 4 0	67	6	1,007	Irrigated by the Sardar and Chakar Khan canals, the former very bad, the latter good. People well-to-do Khatris. Jama very light. Can bear a slight increase.
189	..	189	819	0 3 3	0 3 11	1 0 11	14	..	214	Canal supply very bad. Cultivated area and number of wells decreased. People, though Kirars, very poor and reduced; relief necessary.
32	..	332	966	0 4 5	0 5 4	0 15 3	25	..	342	An improving village. I could not raise the jama up to revenue rates because (1) canal supply is precarious; (2) land is sandy and poor; (3) the people are in too small a way to stand so large an increase at once.
8	..	1,638	3,616	0 7 7	0 8 3	1 2 4	85	26	1,984	Present jama, though slightly higher than revenue rates, is not higher than I have assessed on similarly situated villages. I have therefore retained it. No increase was possible on account of bad canal supply.
	..	975	2,599	0 6 0	0 7 7	1 4 4	45	5	1,289	Canal supply has been very bad, and revenue collected with difficulty. The Budh proprietors badly off and at feud among themselves. Relief necessary, but we need not go so low as revenue rates. The village has been paying a high jama, and if it gets good canal supply, the crops are excellent.
5,050	16	12,694	62,091	0 2 11	0 3 6	1 2 3	922	151	14,893	

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil	Assessment Circle	Khalisah, shared or Jágír	Serial No.	Village.	Highest assessment of			Average demand of last five years	Estimated demand at the Revenue rates of	Proposed assessment	Total area	Minhái			Malguzari	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banam	Government rakh	Uncultivated	
															Culturable waste	Lately abandoned
SANAWAN TAHSIL.			106	Vairar Mundah ..	80	80	33	33	25	20	466	...	1	..	443	3
			107	Vihni wál ..	50	50	52	52	50	52	2,987	..	3	..	2,927	..
			108	Jhurar Gharbi ..	..	..	11	11	25	18	1,352	..	1	..	1,332	..
			109	Arain Chak Gharbi	..	..	197	191	150	177	13,917	..	13	..	13,679	9
			110	Jhurar Sharki ..	40	40	29	29	50	50	2,814	..	3	..	2,739	1
			111	Sak Ishab ..	60	60	70	70	88	70	3,837	..	11	..	3,709	21
			112	Pattal Chak Shamali	..	..	111	111	100	111	4,244	..	8	..	4,116	12
			113	Purchún Sharki ..	73	90	88	83	100	100	4,326	..	13	..	4,204	15
			114	Kulachi ..	245	245	358	350	238	323	11,106	..	15	..	10,726	6
			115	Arain Chak Sharki...	470	470	348	336	250	280	25,301	..	15	10,923	14,039	15
			116	Pattal Chak Janubi	1,120	1,120	1,470	1,190	1,200	1,156	1,27,588	4	107	22,318	1,06,740	221
			117	Patti Sial ..	..	..	308	308	225	221	10,193	...	4,477	5,430	..	46
			118	Ihsanpur ..	3,000	2,800	1,213	1,213	937	1,460	8,659	..	1,841	2,517	2,296	107
			119	Purchún Gharbi ..	..	..	35	34	38	30	1,608	...	3	...	1,554	16
				Carried over ..												

IV.—*continued.*

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				*Assessment per acre on*			*Add to column 11 Grazing and date assessment*			
Cultivated										REMARKS.
Irrigated	Unirrigated	Total	Total Malgusari lands	Total area	Total Malgusari lands	Total land under cultivation	Grazing land jama	Date jama	Grand Total	
19	..	19	465	0 0 8	0 0 8	1 0 10	4	..	24	Consists of two miserable wells in the worst part of the Munda and Bukhi Thal. Area of cultivation at each well below the Thal average.
57	..	57	2,984	0 0 3	0 0 3	0 14 7	29	..	81	
19	..	19	1,351	0 0 3	0 0 3	0 15 2	18	..	31	Consists of two wells. Area of wells below the Thal average. Number of sheep and goats a on which agriculture greatly depends in the Thal is also below the average. Therefore could not increase up to revenue rates.
216	..	216	13,904	0 0 2	0 0 2	0 13 1	137	..	314	Former jama reduced by Rs. 20 because one well had fallen in. No other change necessary. Area of wells above the average. Sheep and goats abundant.
71	..	71	2,811	0 0 3	0 0 3	0 11 3	27	..	77	People fairly well off. Area of wells above average. Plenty of sheep and goats. Can safely go up to revenue rates jama.
96	..	96	3,826	0 0 4	0 0 4	0 11 4	30	..	100	People very poor, no increase possible. Present jama maintained.
108	..	108	4,236	0 0 6	0 0 6	1 0 6	74	..	185	Area of wells average. Plenty of sheep and goats at each well. Crops good when I visited the village. No need to reduce the former jama to revenue rates.
94	..	94	4,213	0 0 4	0 0 4	1 1 0	32	...	142	Can easily stand increase up to revenue rates. Area of wells average, 13½ acres. Good flock of sheep and goats at each well.
359	..	359	11,091	0 0 6	0 0 6	0 14 5	107	..	430	Assessment made at Rs. 17 per well. Village is owned by very industrious Kulachis. A good flock at each well. Area of well above the average, being 19 acres.
309	..	309	14,363	0 0 2	0 0 3	0 14 6	141	..	421	Poor and people badly off. Average area per well 15 acres. Wells not wholly cultivated. Not necessary to reduce as low as revenue rates, though some relief is necessary.
1,199	..	1,199	1,05,159	0 0 2	0 0 2	0 15 5	1,037	..	2,193	Composed of three portions, one of which, called Dagar Chandia, is badly off and requires relief. In this part most of the wells are bitter.
240	..	240	286	0 0 4	0 12 4	0 14 9	49	..	270	Average area per well 13 acres. Cultivated area and number of wells decreased. Present jama heavy. Wells only partially cultivated and land bad. Number of sheep and goats at each well below average and manure consequently scanty.
1,091	107	1,198	3,701	0 2 9	0 6 1	1 2 8	62	8	1,470	There is a large bit of this village which is without the Thal and which gets some canal water. I have assessed the extra Thal wells at an average of Rs. 21 and the intra Thal wells at Rs. 18. A superior village: even the intra Thal wells are better than other Thal villages.
35	..	35	1,605	0 0 4	0 0 4	0 13 9	16	...	46	Land bad even for the Thal. Area of wells below the Thal average; sheep and goats also below the average; a thoroughly bad village.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil	Assessment Circle	Khalisah, shared or Jagir	Serial No.	Village.	Highest assessment of			Average demand of last five years	Estimated demand at the Revenue rates of	Proposed assessment	Total area	Minhái			Malguzari	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government rakh	Uncultivated	
															Culturable waste	Lately abandoned
				Brought forward ..												
			120	Talai Nur Shah ..	330	330	316	305	300	316	21,767	24	4	..	21,358	47
			121	Kahiri Munda ..	130	130	130	130	88	120	5,788	...	17	..	5,633	36
			122	Kat ..	500	500	123	116	76	74	1,244	..	50	539	566	9
			123	Parihar Sharki ..	..	..	822	820	894	1,043	7,215	..	1,161	3,024	2,003	112
			124	Dogar Kalasrah Mundah ..	120	120	120	126	62	70	4,888	..	7	..	4,757	12
			125	Talai Chandhar ..	220	220	278	277	306	288	12,270	..	5	..	11,851	102
			126	Shadi Khan Mundah ..	360	360	492	455	397	412	20,692	..	16	..	20,084	172
			127	Mirpur ..	220	220	237	237	200	256	7,508	..	8	..	7,194	41
			128	Vandhar ..	505	505	597	597	450	558	38,890	..	50	26,104	12,051	85
			129	Parihar Mundah ..	410	410	506	511	463	506	57,573	..	38	30,970	25,804	161
			130	Patti Sultan Mahmud ..	..	..	679	643	588	752	55,341	..	34	16,139	38,243	325
			131	Patti Ghulam Ali Sharki ..	..	..	41	41	25	28	2,096	..	2	..	2,055	39
			132	Patti Chakar Khan ..	..	..	113	113	75	85	4,203	..	3	..	4,075	125
				Carried over ..												

SANAWAN TAHSIL.
THAL CHAHL.
KHALISAH.

IV.—*continued.*

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR.				*Assessment per acre on*			*Add to column 11 Grazing and date assessment*			REMARKS
Cultivated			Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing land jama	Date jama	Grand Total	
Irrigated	Unirrigated	Total								
334	..	334	21,739	0 0 3	0 0 3	0 15 2	214	..	530	No increase possible. Present jama which is slightly above revenue rates, maintained. Owners are industrious—Chandia Belochies.
102	..	102	5,771	0 0 4	0 0 4	1 2 10	56	..	176	Area of wells below the Thal average. Plenty of sheep and goats. One well gone out of gear. People badly off. Relief required but we need not go as low as revenue rates.
67	13	80	655	0 0 11	0 1 10	0 14 10	11	..	85	Cultivated area decreased and wells less by two than before. Cultivated area shown in excess at measurements because an accidental flood got in and some land was cultivated from it.
915	..	915	3,030	0 2 4	0 5 6	1 2 3	20	24	1,067	This, like Ahsanpur, has a piece outside the Thal which gets canal water. This part can bear higher revenue rates than the part in the Thal. The Thal part is bad. The extra Thal part is good and improving. The town of Kot Adu is in this village, it can well bear an increase.
108	..	108	4,881	0 0 3	0 0 3	0 10 10	48	...	118	Three wells out of gear but can be mended. Average area of wells above average. A good flock of sheep and goats at each of the working wells. Wells in work assessed at an average of Rs. 17-0 each. Wells out of work at Rs. 9-8-0 each.
312	..	312	12,265	0 0 4½	0 0 4½	0 14 6	80	1	369	Water in the wells bitter. People badly off and land poor. Area of wells below average. Could not go above Rs. 12-0 per well.
427	..	427	20,676	0 0 4	0 0 4	0 15 4	130	1	543	One well gets canal water. People with the exception of the Kureshis poor. Present jama high for the Thal.
268	..	268	7,500	0 0 7	0 0 6½	0 15 7	72	..	328	Owners fairly well off. Plenty of sheep and goats at each well. Crops very good, when I visited the village. Area of wells above the Thal average.
587	..	587	12,736	0 0 3	0 0 9	0 15 3	121	..	679	Area of wells above the average. Some proprietors very badly off. I assessed this after Patti Sultan Mahmud, which is decidedly superior to it.
612	..	612	26,565	0 0 2	0 0 4	0 13 8	258	..	764	Present jama which is slightly higher than revenue rates jama is maintained.
915	..	915	39,168	0 0 3	0 0 4	0 13 2	272	..	1,024	Wells above the average in area. Sheep and goats plenty, people fairly well off. Revenue collected with ease. Crops very good. Proposed assessment averages Rs. 16 per well.
33	..	33	2,094	0 0 3	0 0 3	0 13 7	6	..	34	Contains only two wells which are inferior to those in the neighbourhood. Sheep and goats at each well few. Present jama high for such bad wells. Proposed jama is at Rs. 14 per well.
88	...	88	4,200	0 0 4	0 0 4	0 15 3	41	..	126	Cultivated area and number of wells have decreased. Average area of each well 14-2 acres, proposed assessment at Rs. 17 per well.

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Name of Tahsil	Assessment Circle	Khalisah shared, or Jagir	Serial No.	Village	Highest Assessment of			Average demand of last five years	Estimated demand at the revenue rates of	Proposed assessment	Total area	Minhái			MALGUZARI	
					1st Settlement	2nd Settlement	3rd Settlement					Lakhiraj	Banen	Government rakh	Uncultivated	
															Culturable waste	Lately abandoned
SANAWAN TAHSIL.	THAL CHAHI.	KHALISAH.	133	Patti Daya Chokha	...	...	688	627	496	652	13,719	..	54	..	12,853	125
			134	Dhún ..	20	20	8	8	62	62	1,405	..	3	..	1,813	8
				Total ..	7,968	7,770	9,546	9,090	7,951	9,220	4,72,897	28	7,968	1,17,964	8,35,448	1,435
				Grand total ...	1,88,271	1,23,246	1,21,594	1,20,505	1,19,604	1,22,781	8,49,442	283	65,877	1,62,443	5,01,375	12,028
				Grand total of District	5,59,293 9 3	3,41,142 10 6	4,09,661 13 3	5,04,970 4 1	5,24,913	5,24,468	20,09,156	898	2,81,725	3,11,564	9,68,870	61,842

IV.—*concluded*

18	19	20	21	22	23	24	25	26	27	28
INCLUDING JAGIR				*Assessment per acre on*			*Add to column* 11 *Grazing and date assessment*			
Cultivated										
Irrigated	Unirrigated	Total	Total Malguzari lands	Total area	Total Malguzari lands	Total land under cultivation	Grazing land jama	Date jama	Grand Total	REMARKS.
667	..	667	13,665	0 0 9	0 0 9	0 15 2	129	1	782	On the tail of those sinners the Rajuwah and Muhammadpuri canals; supply of water bad. People poor and in debt. A good flock of sheep and goats at each well. Proposed assessment is at Rs. 16 per well unassisted, and Rs. 30 per well assisted, by canal water.
81	..	81	1,402	0 0 9	0 0 9	0 12 3	13	..	75	
9,439	120	9,559	3,46,442	0 0 4	0 0 5	0 15 5	3,239	35	12,504	
82,210	25,559	1,07,769	6,21,172	0 2 4	0 3 2	1 2 2	9,480	3,690 8 0	1,35,961 8 0	
2,80,571	1,18,696	3,99,267	14,14,979	..	..	..	83,338 0 0	19,126 10 0	5,76,981 10 0	

E. O'BRIEN,

Settlement Officer.

APPENDIX No. V

APPENDIX V.

FORM D.

General abstract of area under crops showing productive capacity in the several assessment circles of the Muzaffargarh District.

1	2	3	4	5	6	7	8	9	10	11	12
		Crops of the 1st order of value.									
Name of Tahsil.	Present status.	Indigo.	Sugarcane.	Gur.	Vegetables.	Poppy.	Tobacco.	Safflower.	Red pepper.	Cotton (uncleaned.)	Total.
Muzaffargarh	Area ...	9,858 0 0	2	3,392 0 0	192	2	362 0 0	9 0 0	32	16,706 0 0	30,555 0 0
	Value of gross produce	2,00,744 11 8	160	1,76,017 4 9	6,310	80	10,252 0 0	86 6 5	1,060	2,99,407 14 7	6,94,118 5 5
Alípur ...	Area ...	8,111 0 0	...	881 0 0	149	37	412 0 0	61 0 0	101	4,991 0 0	14,743 0 0
	Value of gross produce	1,29,776 0 0	...	48,054 8 8	4,115	1,480	12,020 0 0	244 0 0	3,425	90,596 5 11	2,89,710 14 7
Sanawan	Area ...	2,861 0 0	...	74 0 0	240	...	201 0 0	... ...	2	8,014 0 0	11,392 0 0
	Value of gross produce	72,612 6 0	...	6,449 9 4	7,770	...	6,234 6 0	... ...	42	1,32,828 5 0	2,25,936 10 4
Total	Area ...	20,830 0 0	2	4,347 0 0	581	39	975 0 0	70 0 0	135	29,714 0 0	56,690 0 0
	Value of gross produce	4,03,133 1 8	160	2,30,521 6 9	18,195	1,560	28,506 6 0	330 6 5	4,527	5,22,832 9 6	12,09,765 14 4

FORM D—continued.

Name of Tahsil.	Present status.	13	14	15	16	17	18	19	20	21
		Crops of the 2nd order of value.								
		Wheat.	Gram.	Mung.	Mash.	Melon.	Water melon.	Onions.	Til.	Total.
Muzaffar-garh ...	Area ...	86,824 0 0	4,613 0 0	120 0 0	342 0 0	227	2	80	3,553 0 0	95,761 0 0
	Value of gross produce	11,26,614 4 9	32,902 9 8	1,300 3 5	3,715 14 8	6,460	50	2,575	41,156 14 9	12,14,774 15 3
Alípur ...	Area ...	56,853 0 0	3,962 0 0	103 0 0	8 0 0	...	44	59	404 0 0	61,433 0 0
	Value of gross produce	6,39,993 3 7	25,980 5 2	564 13 1	101 9 5	...	1,290	1,745	4,104 15 6	6,73,779 14 9
Sanawan ...	Area ...	57,820 0 0	4,052 0 0	37 0 0	... .	...	14	8	124 0 0	62,055 0 0
	Value of gross produce	7,33,874 1 0	38,781 8 6	201 3 0	... ...	...	420	160	1,488 0 0	7,74,924 12 6
Total ...	Area ...	201,497 0 0	12,627 0 0	260 0 0	350 0 0	227	60	147	4,081 0 0	2,19,249 0 0
	Value of gross produce	25,00,481 12 4	97,664 7 4	2,066 3 6	3,817 8 1	6,460	1,760	4,480	46,749 14 3	26,63,479 10 6

FORM D—continued.

Name of Tahsil.	Present status.	38	39	40	41	42	43	44	45
		Crops of the 4th order of value—continued.							
		Samuka.	Chins.	Usaun.	Turnip.	Peas.	Lobia	Kuria.	Kangni.
Muzaffargarh ...	Area ...	159 0 0	414 0 0	1,570 0 0	5,145 0 0	11,465 0 0	108 0 0	7 0 0	49 0 0
	Value of gross produce...	583 8 0	2,071 11 5	9,567 10 7	40,976 15 6	60,029 1 1	922 15 6	22 13 1	241 15 7
Alipur ...	Area ...	302 0 0	55 0 0	2,054 0 0	1,412 0 0	10,603 0 0	... ...	... ...	21 0 0
	Value of gross produce...	923 11 6	363 10 3	10,085 13 11	9,157 0 0	46,606 9 7	... ...	... ...	150 0 0
Sanawan ...	Area ...	31 0 0	73 0 0	4,921 0 0	5,943 0 0	3,317 0 0	6 0 0	9 0 0	13 0 0
	Value of gross produce...	93 0 0	507 8 0	22,522 14 7	38,448 6 0	12,715 2 3	60 0 0	... ...	104 0 0
Total ...	Area ...	492 0 0	542 0 0	8,545 0 0	12,500 0 0	25,385 0 0	114 0 0	16 0 0	83 0 0
	Value of gross produce...	1,600 3 6	2,942 13 8	42,176 7 1	88,582 5 6	1,19,350 12 11	982 15 6	22 13 1	495 15 7

FORM D—concluded.

Name of Tahsil.	Present status.	46	47	48	49	50	51
		Crops of the 4th order of value.—concluded.					
		Nangni.	Linseed.	Goja, Goji.	Total.	Total area under crops.	Half net of assets jama.
Muzaffargarh ...	Area ...	2 0 0	... ...	...	21,242 0 0	1,69,632 0 0	... ...
	Value of gross produce ...	6 6 5	... ...	...	1,24,669 15 8	22,31,283 13 9	3,25,499 0 0
Alipur ...	Area ...	187 0 0	... ...	...	16,723 0 0	1,21,029 0 0	... ...
	Value of gross produce ...	534 4 7	... ...	...	76,747 10 7	12,77,706 15 4	2,12,931 2 6
Sanawan ...	Area ...	... ...	1 0 0	286	16,607 0 0	1,06,868 0 0	... ...
	Value of gross produce ...	... ...	8 2 0	3,640	90,458 10 2	11,78,887 4 10	1,96,461 3 6
Total ...	Area ...	189 0 0	1 0 0	286	54,572 0 0	3,97,529 0 0	... ...
	Value of gross produce ...	540 11 0	8 2 0	3,640	2,91,876 4 5	46,87,878 1 11	7,34,911 6 0